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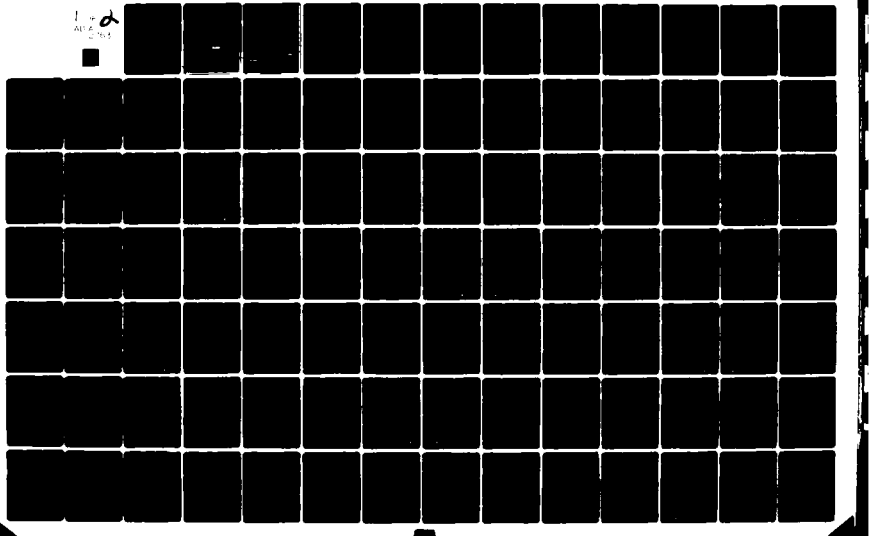

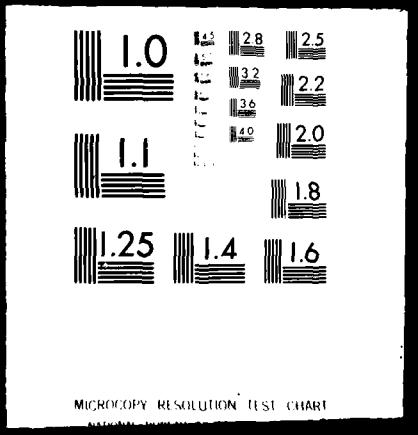

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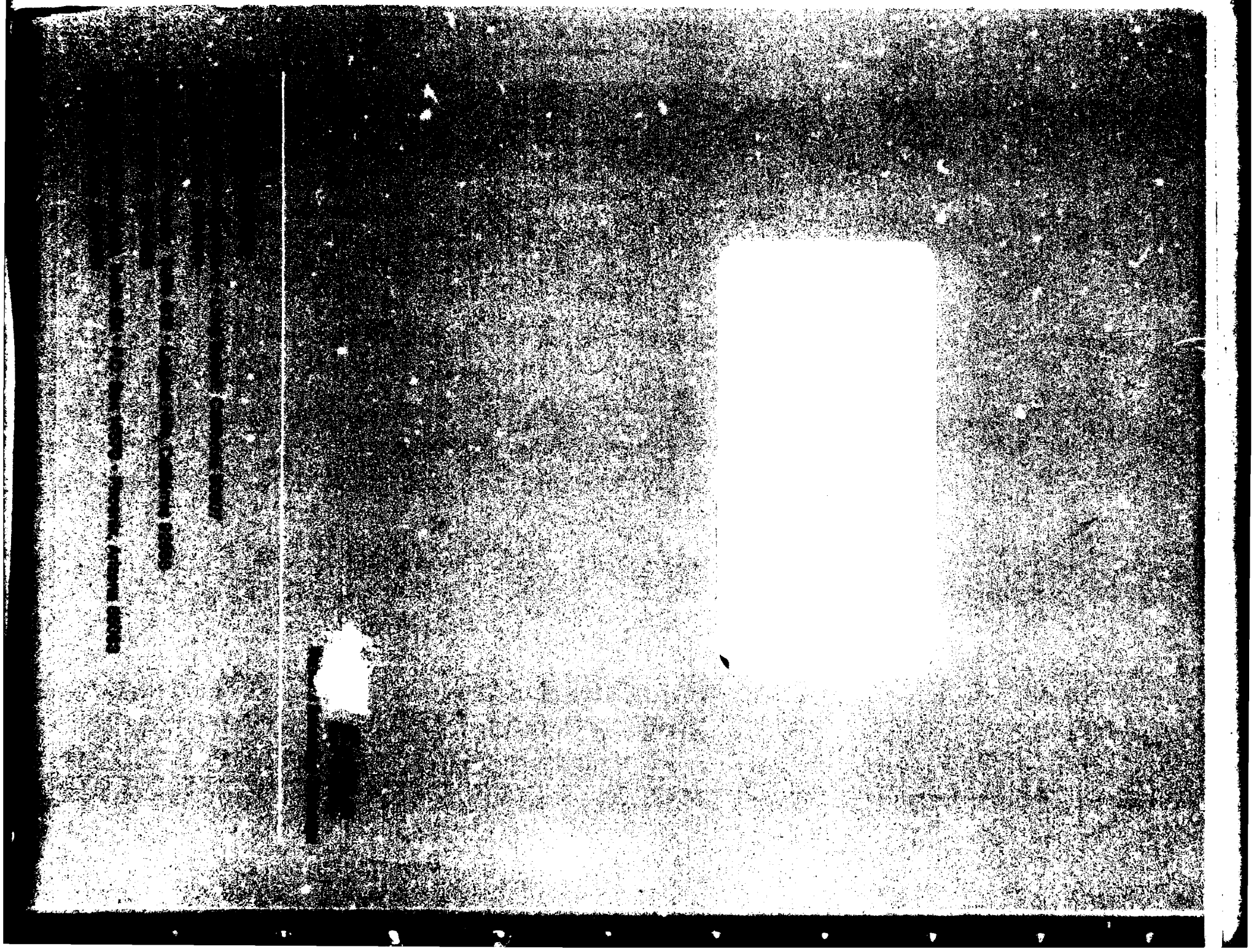

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1. REPORT NUMBER: E-TR-59-I
2. GOVT ACCESSION NO.: AD-A112 763
3. RECIPIENT'S CATALOG NUMBER:
4. TITLE (and Subtitle): DTN/OBS Field Surveys Data Compilation Volume I Program Overview Geotechnical Summary
5. TYPE OF REPORT & PERIOD COVERED: Final
6. PERFORMING ORG. REPORT NUMBER: E-TR-59-I
7. AUTHOR(s): ERTEC Western, Inc
8. CONTRACT OR GRANT NUMBER(s): F04704-80-C-0006
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Ertec Western Inc. (formerly Fugro National) P.O. Box 7765 Long Beach Ca 90807
10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 64312 F
11. CONTROLLING OFFICE NAME AND ADDRESS: U.S. Department of the Air Force Space and Missile Systems Organization Norton AFB Ca 92409 (SAMSO)
12. REPORT DATE: 30 Nov 81
13. NUMBER OF PAGES: 14
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office):
15. SECURITY CLASS. (of this report): Unclassified
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE:
16. DISTRIBUTION STATEMENT (of this Report): Distribution Unlimited
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report): Distribution Unlimited
18. SUPPLEMENTARY NOTES:
19. KEY WORDS (Continue on reverse side if necessary and identify by block number): Geotechnical, Environmental, Field surveys, Roads, Biological, cultural, geographical
20. ABSTRACT (Continue on reverse side if necessary and identify by block number): Results of the Designated Transportation Network/Operational Base Test Base field surveys in the proposed sites in Nevada and Utah. Identified two OBTS locations for each Main Operational Base site, with the exception of Coyote Canyon, Nevada. Examinations were made of the geotechnical, environmental, and cultural resources of the area.

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DTN/OBTS FIELD SURVEYS
DATA COMPILATION
VOLUME I
PROGRAM OVERVIEW
GEOTECHNICAL SUMMARY

Prepared for:

U.S. Department of the Air Force
Ballistic Missile Office
Norton Air Force Base, California 92409

Prepared by:

Ertec Western, Inc.
3777 Long Beach Boulevard
Long Beach, California 90807

30 November 1981

FOREWORD

The field surveys were performed under Change Order P00026 to Contract No. F04704-80-C-0006. The three volumes represent a compilation of data, rather than a formal report, and reflect the status of the surveys as of 2 October 1981. The request for this format is contained in the Stop Work Order, dated 15 October 1981, Item F.

This volume, Volume I, presents a brief program overview and a geotechnical summary. The environmental field surveys data are contained in Volumes II and III.

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Delamar Lake
Delamar NW
Delamar
Pahroc Spring SE

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Blue Mountain
Lund
The Tetons
Observation Knoll
Bible Spring
Beryl
Bannion Spring
Steamboat Mountain

1.0 INTRODUCTION

1.1 OBJECTIVES AND SCOPE

The field surveys consisted of preliminary geotechnical inspections and environmental surveys at proposed Operational Base Test Site (OBTS) locations, along road corridors between Designated Assembly Areas (DAAs) and OBTSs, and segments of Designated Transportation Network (DTN) corridors from Operational Base (OB) sites toward Initial Operational Capability (IOC) valleys. The purpose of the study was to determine if any significant geotechnical or environmental concerns or impacts exist which would preclude the use of the proposed sites or road corridors. The data were to be used to determine the preferred OBTS location, road locations, and DTN route and to make recommendations for relocations or route refinements.

The field surveys were to be performed at a preferred and alternate OBTS for each Main Operational Base (MOB) option at Beryl and Milford, Utah, and Clovis, New Mexico. Restrictions at the Coyote Spring, Nevada, MOB precluded the identification of an alternate OBTS location; the location studied contained two alternate layouts. Field surveys were also to be performed along the roads connecting the OBTS with either the DAA or DTN, and along DTN segments from the DAA toward the IOC valleys; these valleys are Dry Lake Valley, Nevada, and Pine and Wah Wah valleys, Utah. An alternate OBTS at the Beryl MOB, Utah, two OBTSs at the Cannon MOB, New Mexico, and major portions of the OBTS roads in Utah and New Mexico were not surveyed because

permission to enter onto the private land at the sites was not obtained prior to the end of the FY 81 field season. The following table summarizes the areas and road segments studied.

OBTS

MOB	OBTS	AREA (Acres/Mi^2)
Coyote		7360/11.5
Beryl	Preferred	6720/10.5
Milford Central	Preferred	6080/ 9.5
	Alternate	4162/ 6.5
Milford South	Preferred	(same as Milford Central)
	Alternate	
	TOTAL	24,322/38.0

DTN/OBTS ROADS (Segment)	Miles	(km)
OBTS - DAA Road-Coyote Spring MOB (A-CP)	4	(6.4)
DTN - Coyote Spring MOB to Dry Lake Valley (A-B)	55	(88.5)
DTN - Milford Central MOB to Pine Valley (I-D)	25	(40.2)
DTN - Beryl MOB to Pine Valley (F-D)	20	(32.2)
DTN - Milford South MOB to Jockey Road (G-Y)	10	(16.1)
OBTS - DAA Road-Beryl MOB (F-BP)	9	(14.5)
Total	123	(197.9)

All of the listed OBTSs in Nevada and Utah were surveyed for cultural and biological resources and geotechnical conditions. The entire DTN route in Nevada was biologically surveyed; only 6.6 miles (10.6 km) were surveyed for cultural resources.

The OBTS road and DTN routes in Utah were surveyed for biological resources and geotechnical conditions only; cultural resources assessments were not made of these areas.

1.2 SCHEDULE

The field surveys began 9 July 1981 with location surveying of the DTN in Nevada. Location surveying of the DTN in Utah began 24 August 1981. Environmental surveys were conducted from 13 July through September 1981. Geotechnical inspections were conducted in the last half of September 1981.

2.0 OBTS STUDIES

2.1 SELECTION OF OBTS LOCALITIES

A detailed discussion of the methodology and criteria used for selection of the OBTS locations is presented in the OBTS/DTA Siting Report (E-TR-58). The locations of the OBTSs are on the maps presented as part of the Land Acquisition Package.

Operational, geotechnical, geographical, and environmental criteria for the OBTS were applied to establish "siteable" areas in the vicinity of the MOBs. The OBTSs were sited in windows that were not excluded from consideration. With the exception of Coyote Spring MOB, two OBTS locations were identified for each MOB site to provide alternate choices to satisfy Tier IIA requirements.

2.2 SURVEY LOCATIONS

The OBTS area to be surveyed consisted of an envelope that encompassed all site locations and a 1/4-mile- (0.4-km) wide buffer zone. The OBTS polygons were plotted on 1:62,500 scale maps and the land status of the site locations determined. Pursuant to the Cooperative Agreement be-tween the Air Force and the BLM, Letters of Authorization were obtained prior to the field surveys. Permission to enter private land was being obtained by the Corps of Engineers. At the time the field surveys were terminated, permission to enter private land had not been obtained for Utah or New Mexico. The alternate OBTS at Beryl and all sites in New Mexico were not surveyed for this reason.

2.3 ENVIRONMENTAL SURVEYS

A more complete description of the methodology used for the environmental surveys is presented with the environmental data, contained Volumes II and III of this report.

2.4 GEOTECHNICAL INSPECTIONS

The geotechnical inspections consisted of visual surveys of the general area of the OBTS. The map scale used to site the OBTS precluded locating any specific facility in the field and assessing site-specific conditions. Observations were made of soil type, erosion and flooding potential, excavatability, slope, and depth to rock at several different locations along a transect through the site.

2.5 RESULTS OF GEOTECHNICAL INSPECTIONS

2.5.1 Coyote Spring OBTS

The Coyote Spring OBTS is located on a highly dissected bench between two major washes and a mountain range. Although the surface slope is essentially flat (one to two percent), large washes up to 20 feet (6 m) deep cut across the proposed site. However, the OBTS facilities can be sited in areas with washes having an average depth of 8 feet (2 m). The surface material is predominantly older alluvial fan deposits which consist of very sandy gravel. The density of the surficial soils is generally in the medium-dense to dense range. Lenses and layers of caliche cementation frequently exist in the fan deposits. The cementation might present difficulties in excavating and grading. Cobbles and boulders make up approximately 10 percent

of the unit. The two easternmost shelters are sited close to potential flooding areas.

More detailed data of the site can be found in the Coyote Spring MOB report (E-TR-43). The site is acceptable for the planned facilities.

2.5.2 Milford Preferred OBTS

The Milford preferred OBTS is located on a flat to gently rolling bench area at the base of a series of hills and mountains. The OBTS polygon is characterized by alluvial fan deposits, predominantly young in age, although some areas of intermediate alluvial fans, to the east, are present. The site generally slopes approximately three percent, although the middle portion of the site is almost flat, with a slope of less than one percent. Some sheet flow may be expected, especially in the middle portion of the site, although flow should be concentrated in the well-defined channels that range from less than 1 foot (0.3 m) deep in the north to 3 feet (1 m) deep in the east. A 5- to 6-foot (1.5- to 2-m) deep wash with vertical walls trends NE-SW across the eastern portion of the polygon and will require drainage structures if the roads cross it.

The surface is characterized by poor to moderate surface lag gravel development. The surface gravels range from having moderate caliche coatings in the north to none in the southeast. The soils are composed mostly of medium-dense, fine to medium sand. The silt content gradually increases from the north to the southeast, ranging up to approximately 15 percent.

The northern portion of the polygon contains approximately three percent cobbles and has boulders near the drainage channels. The rest of the site does not contain any surface cobbles or boulders.

Based on geotechnical factors, the preferred layout is within the southern and eastern part of the OBTS polygon.

2.5.3 Milford Alternate OBTS

The Milford alternate OBTS is located in a basin formed by rock outcrops forming low-lying hills. Although the bedding of the rock is away from the basin, the potential for shallow rock under the site is high. The surface slopes less than three percent and is gently rolling. The OBTS polygon is characterized by young sandy alluvial fan deposits, with some lag gravels at the surface. The surface gravels have caliche coatings, which may indicate moderate to slight caliche cementation at depth. Cobbles comprise approximately three to five percent of the soils. Some sheet flow may be possible, but surface flow will mainly be confined in well-defined washes, 2 to 3 feet (0.6 to 1 m) deep. The channels contain heavy concentrations of gravels at the bottom and are perpendicular to the conceptual roads network of the preferred layout. Some drainage diversion or channelization will be required if any facilities or roads cross the drainages. The Milford alternate OBTS is acceptable as sited. Additional subsurface work to define the depth to rock will be necessary prior to design studies.

2.5.4 Beryl Preferred OBTS

The northern part of the Beryl preferred OBTS is located in a mixed area of rugged terrain, with washes up to 5 feet (1.5 m) deep, while the southern end is characterized by gently rolling terrain with small washes cutting through the site. Both conceptual layouts within the OBTS polygon are within both topography types; major construction considerations will be drainage crossings and considerable grading work. The surface slopes up to three percent and consists of sandy silts and silty sands characteristic of intermediate alluvial fan deposits. Erosion of silty deposits in the road beds resulted in deep ruts. These silty deposits should be taken into account in the design studies. Drainage is concentrated along well defined channels; sheet flow should not be a problem.

The OBTS facilities can be sited in this area, although determination of the preferred layout will require additional field studies.

2.5.5 Beryl Alternate OBTS

Geotechnical inspections of the Beryl alternate OBTS were made from existing roads; access to private land was not required for the surveys. The topography at the Beryl alternate OBTS is essentially flat, with a slope of one to two percent. The surface is characterized by minor development of surface lag gravels. The medium-dense sandy soils are deposits of young alluvial fans. In minor areas, the sands are mixed with old lake bed deposits composed of silts. The western edge of the

OBTS polygon is sandier, with defined washes 1 to 2 feet (0.3 to 0.6 m) deep. The rest of the study area will be subject to sheet flow across the surface. The site is suitable for the OBTS.

3.0 DTN STUDIES

3.1 SELECTION OF DTN ROUTE

The DTN routes for the system were studied and selected by the DTN Working Group, consisting of technical personnel from Ertec Western, TRW, Martin Marietta, R. M. Parsons, HDR, COE, and AFRCE. The areas to be studied for the field surveys included those segments that would connect the MOB or DAA with the IOC valleys; the main purpose of this plan was to provide a complete and feasible package for construction of the first phase of the system and to support Tier IIA requirements.

A more detailed discussion of the proposed DTN route is included in the DTN Siting Report (E-TR-58).

3.2 DIGITIZING DTN

The selected DTN route was transferred from 1:62,500 conceptual alignments to the most detailed map scale available. Most of the area is covered by 7-1/2 minute topographic maps (1:24,000). The alignment through Delamar Valley was transferred to 1:9600 scale maps. The transferred alignments were submitted to the DTN Working Group for approval and refinements to the alignment. From these maps, the intersection points between straightline segments, Points of Intersection (PI) were digitized. The latitude and longitude of the PIs were translated into the appropriate State Plane coordinate system. Segments of the DTN that coexist with existing roads were not digitized since the existing alignment was followed for the route.

3.3 LOCATION SURVEYING

The DTN PIs were location-surveyed to third order accuracy (1 foot in 5000 feet) from known, existing control points. The PIs were numbered and marked with an aluminum cap on a rebar driven flush with the ground, a metal fence post, and access flagging. Additional markers, located by vehicle odometer, were set at 1/4-mile (0.4-km) and 1-mile (1.6-km) intervals along the DTN route that did not coexist with an existing road. These additional stations were necessary to locate environmental survey and transect locations and for reference purposes.

The DTN had several different degrees of flexibility along its route. Where no limitations are present, 2-mile (3-km)-wide corridors, 1 mile (1.6 km) to either side of the staked centerline, were considered the study area. This entire width was studied, with the idea that during the design phase, the actual DTN route could be located anywhere within the 2-mile (3-km)-wide corridor. In some areas, the route was fully restricted due to clustering in the valley, wilderness areas, wilderness study areas, mining claims, etc. These restrictions dictated that the DTN route could not be moved a great deal within the study corridor. The actual corridor width was determined by the nature of the restriction and the standoff distance specified by AFRCE.

3.4 ENVIRONMENTAL SURVEYS

A discussion of the environmental surveys is included in Volumes II and II of this report.

3.5 GEOTECHNICAL INSPECTIONS

Geotechnical inspections consisted of visual surveys along the DTN centerline to identify any features that would impact the proposed routing, such as major washes, playas, fine-grained soils with low-bearing capacity, fault traces, etc. Identification of any of these features would be used to make recommendations for relocations. The geotechnical inspections, however, were not for the purpose of collecting design data but to refine the DTN alignment and to identify any "fatal flaws" along the route.

3.6 RESULTS OF GEOTECHNICAL INSPECTIONS

3.6.1 Nevada DTN

The DTN between the Coyote Spring MOB and Dry Lake Valley (segment A-B) was visually surveyed along the portions that coexist with roads. The portions of the route which are not along existing roads were evaluated at several points by transects perpendicular to the alignment. The actual staked centerline for off-road segments was not continuously surveyed.

The findings of the geotechnical inspections are presented on the attached maps. In general, the DTN is feasible along the proposed route. More detailed design studies will be necessary to determine the best routing based on requirements such as balance of cut-and-fill and drainages for the segments from Highway 93 at Maynard Lake to the bottom of Delamar Valley at Delamar Pass. The terrain through this area is extremely rugged, and grades up to seven percent are present. Another problem occurs where the DTN crosses Delamar Lake, which is

composed of very fine silts and clays. The soils erode easily both from mechanical and fluvial processes. They are also characterized by a moderate to high shrink-swell potential and low-bearing value when flooded. An elevated roadway is necessary to provide adequate base course material, to reduce the bearing pressure on the in-situ soils, and to avoid flooding. The northern segment of the DTN, from the power substation, marked on the map to Dry Lake Valley cuts across the alluvial fan surface and many well-established drainage channels. These channels tend to produce a "roller-coaster" effect along the road, with 3- to 4-foot (0.9- to 1.2-m) deep washes occurring approximately every 0.3 to 0.4 mile (0.5 to 0.6 km). Sheet flow across the road surface is common. Ponding in small localized areas is also evident. Numerous drainage diversions along this segment of the route will be necessary.

For most of the route, with the exceptions noted above and marked on the maps, the soil in Delamar Valley is composed of sandy silt or silty sand with varying amounts of gravel and cobbles. The soils in Coyote Spring Valley are composed of silty sand and sandy gravel. Boulders are common in the mountain pass where the soil cover is very thin and rock is close to the surface.

The route as surveyed is feasible; however, more detailed design studies, using large-scale topographic maps, will be required to maximize balance of cut-and-fill and minimize drainage works.

3.6.2 Utah DTN

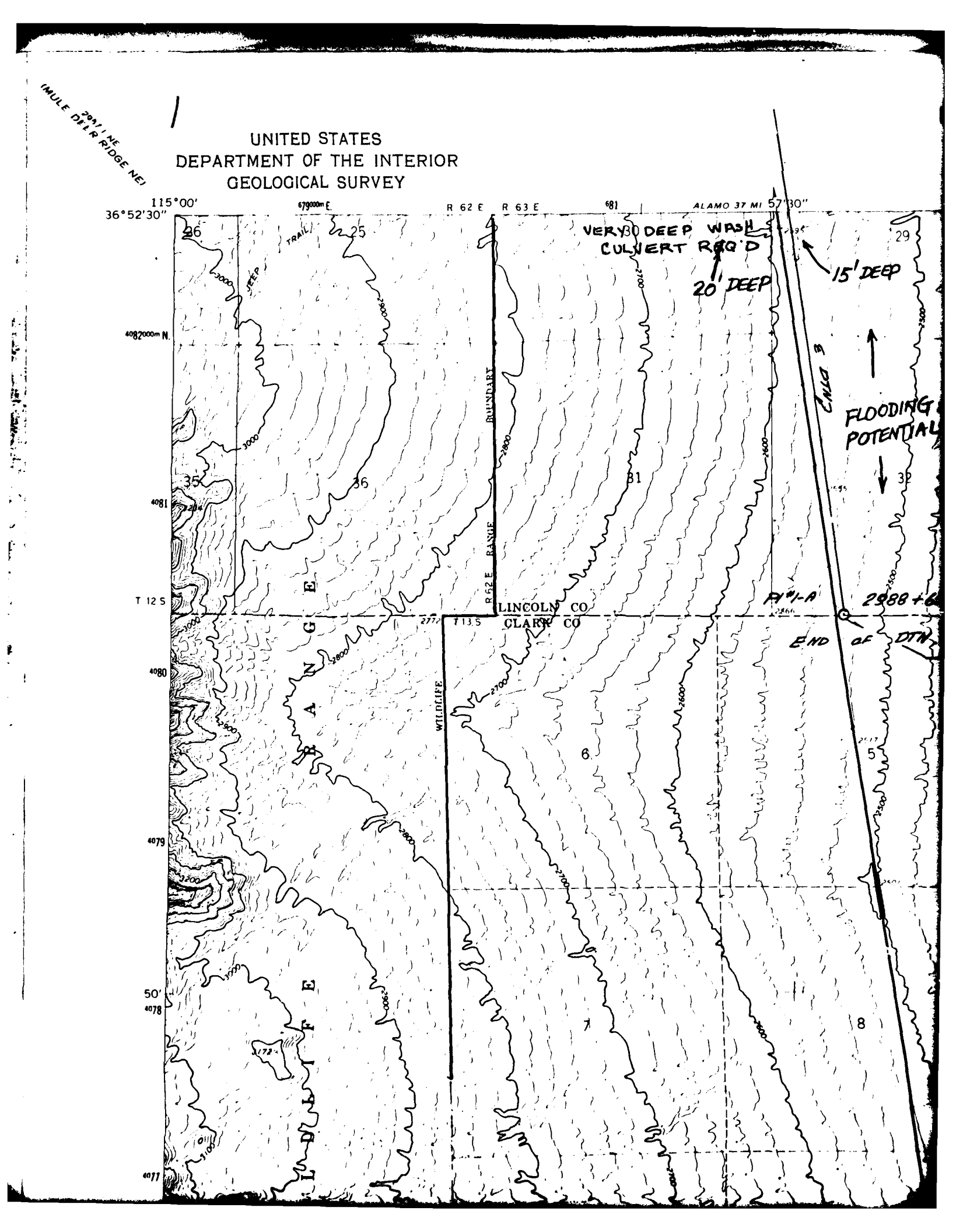
Several segments of the DTN in Utah, identified as I-D, G-Y, and F-D on the maps, were visually surveyed. The portions that are not along existing roads were evaluated at several points by transects perpendicular to the alignment, but was not continuously surveyed.

The DTN routes surveyed are topographically restricted in many locations by mountains and rock hills, limiting the flexibility for optimizing the route. Generally, the route is feasible and constructible along its entire length. The route is crossed many times by an active stream within Miller Meadows. In many places, the road and stream banks are heavily eroded and undercut. This area will require rechannelization of the stream or many drainage culverts along the route. The same problem exists near the north end of Blue Mountain along Segments I-D and G-Y and at other areas identified on the maps.

Minor areas, especially by Red Hill, will require extensive cut-and-fill to reduce the grade.

A major crossing structure at Meadow Spring (along Segment F-D) will be required where the DTN crosses Mountain Spring Wash. The wash at this location is more than 50 feet (15 m) wide with vertical walls approximately 30 feet (9 m) deep at the maximum.

Detailed design studies, utilizing large-scale topographic maps, will be required prior to construction to minimize drainage works, maximize balance of cut-and-fill, and optimize the route.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BTS FIELD SURVEYS
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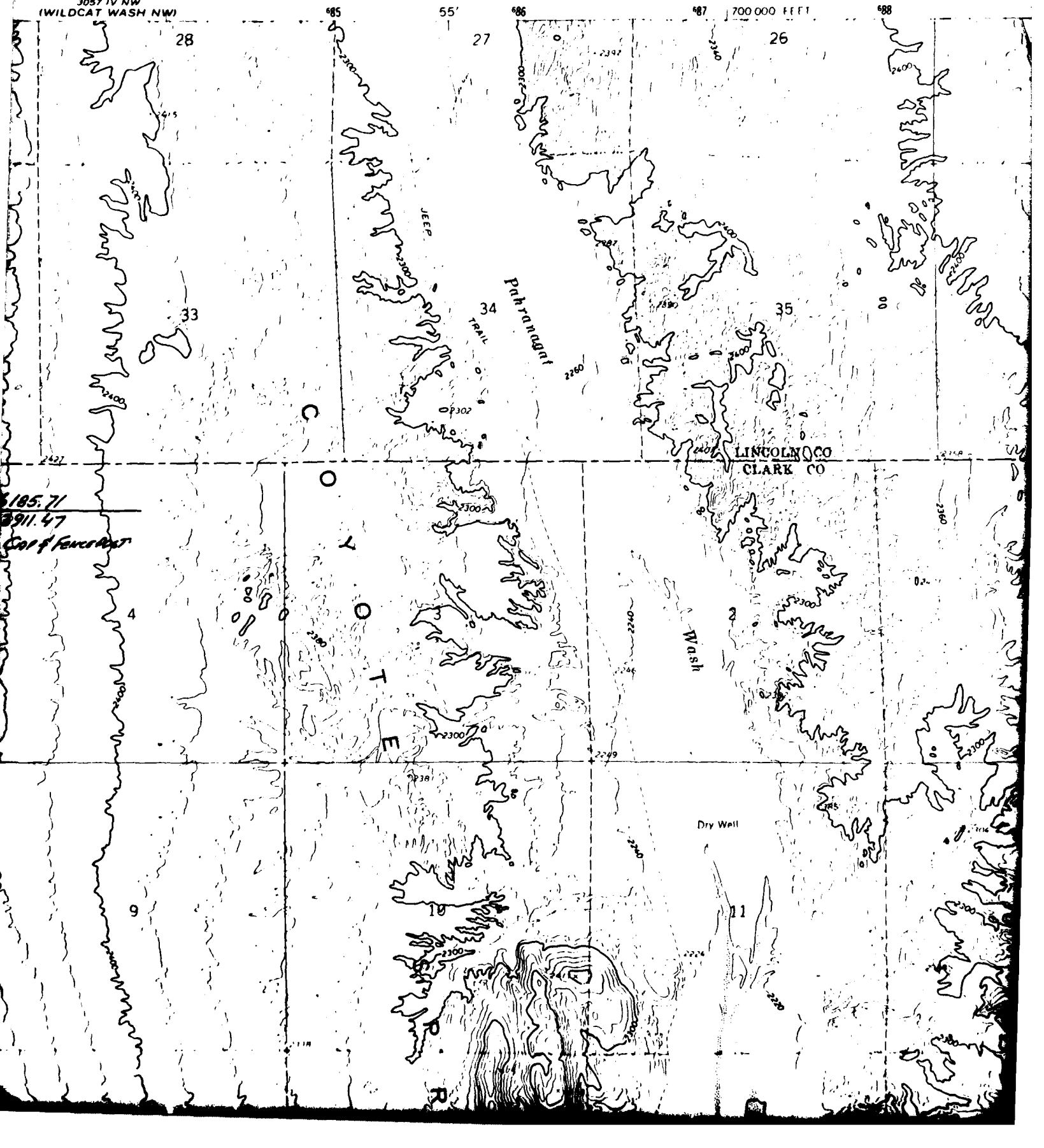

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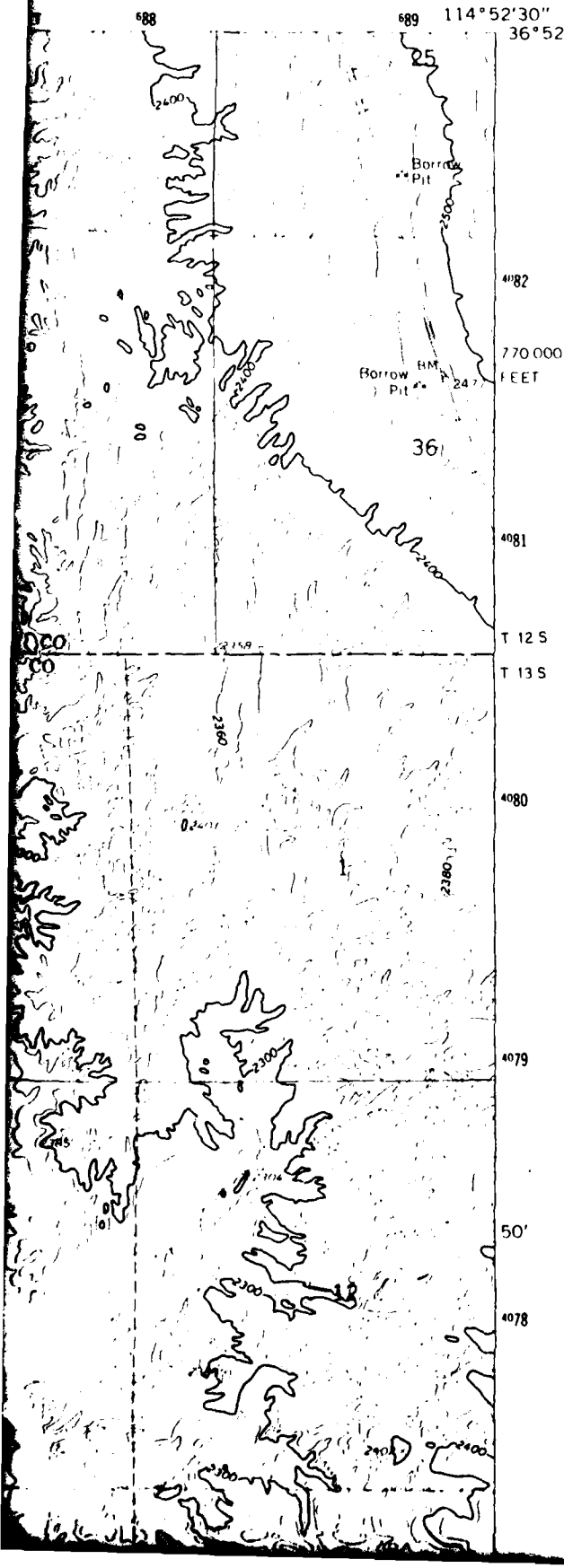

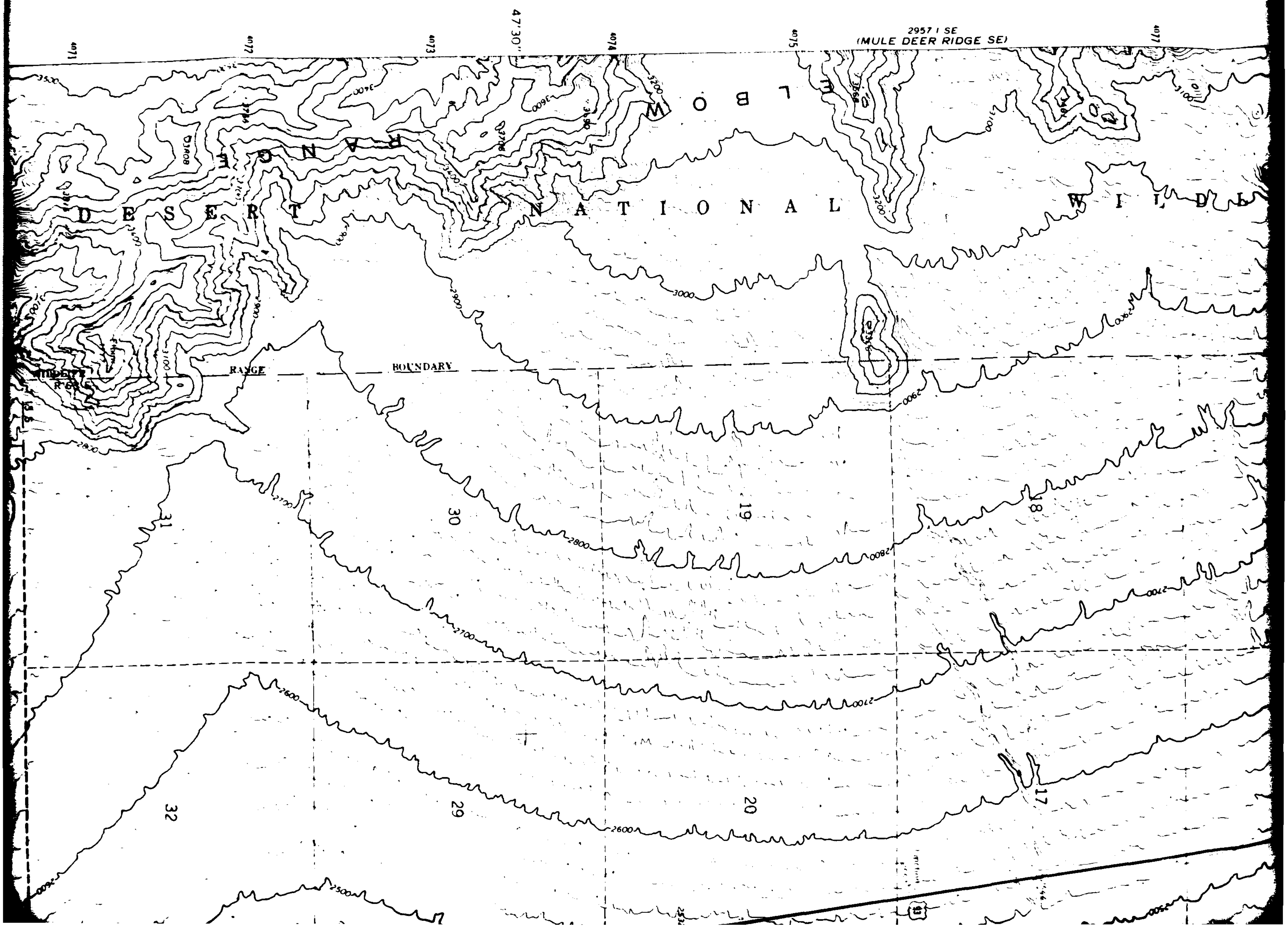

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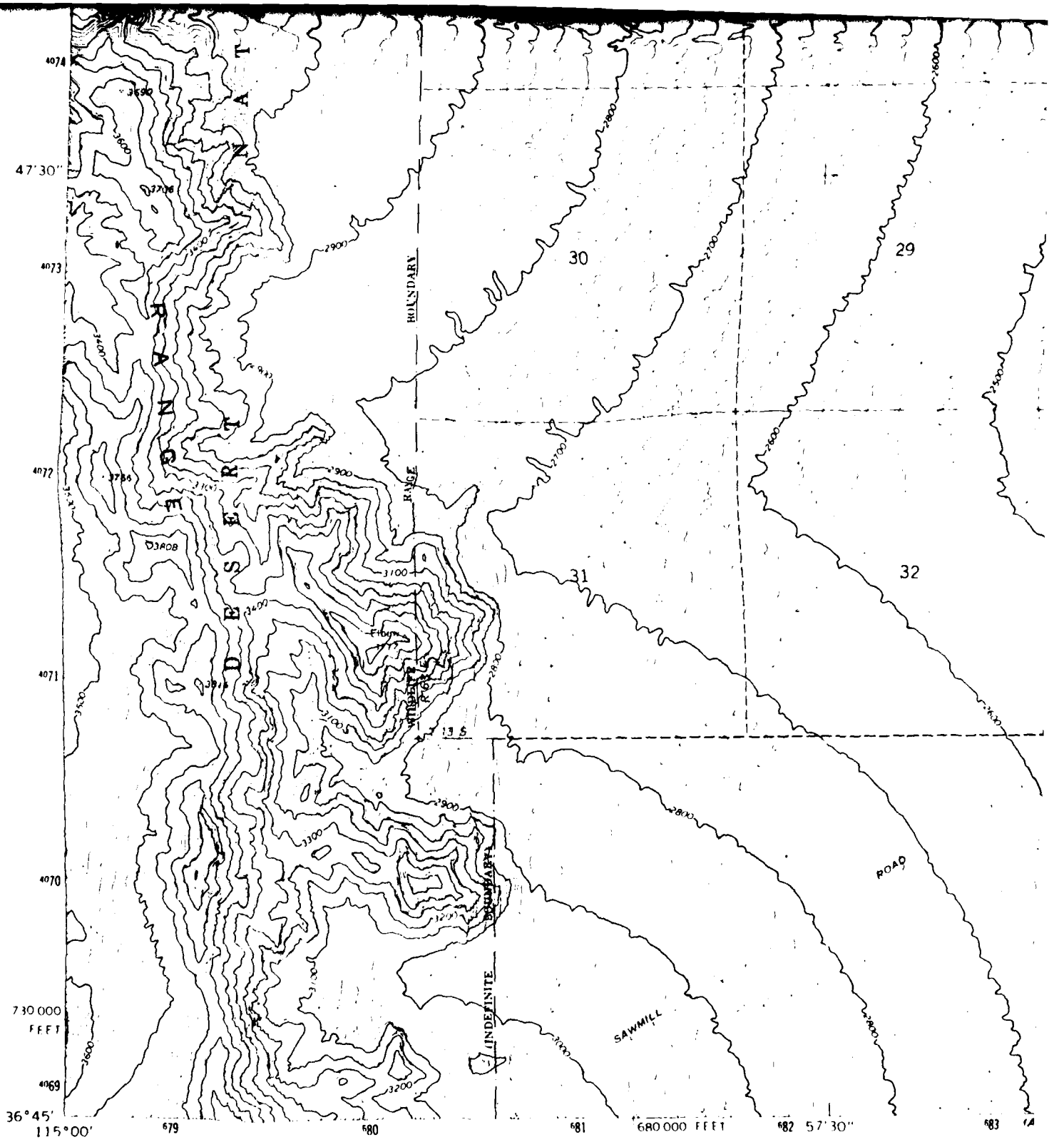

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Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10,000 foot grid based on Nevada coordinate system, east zone
1000 meter Universal Transverse Mercator grid ticks,
zone 11, shown in blue

Where omitted, land lines have not been established

2957 II
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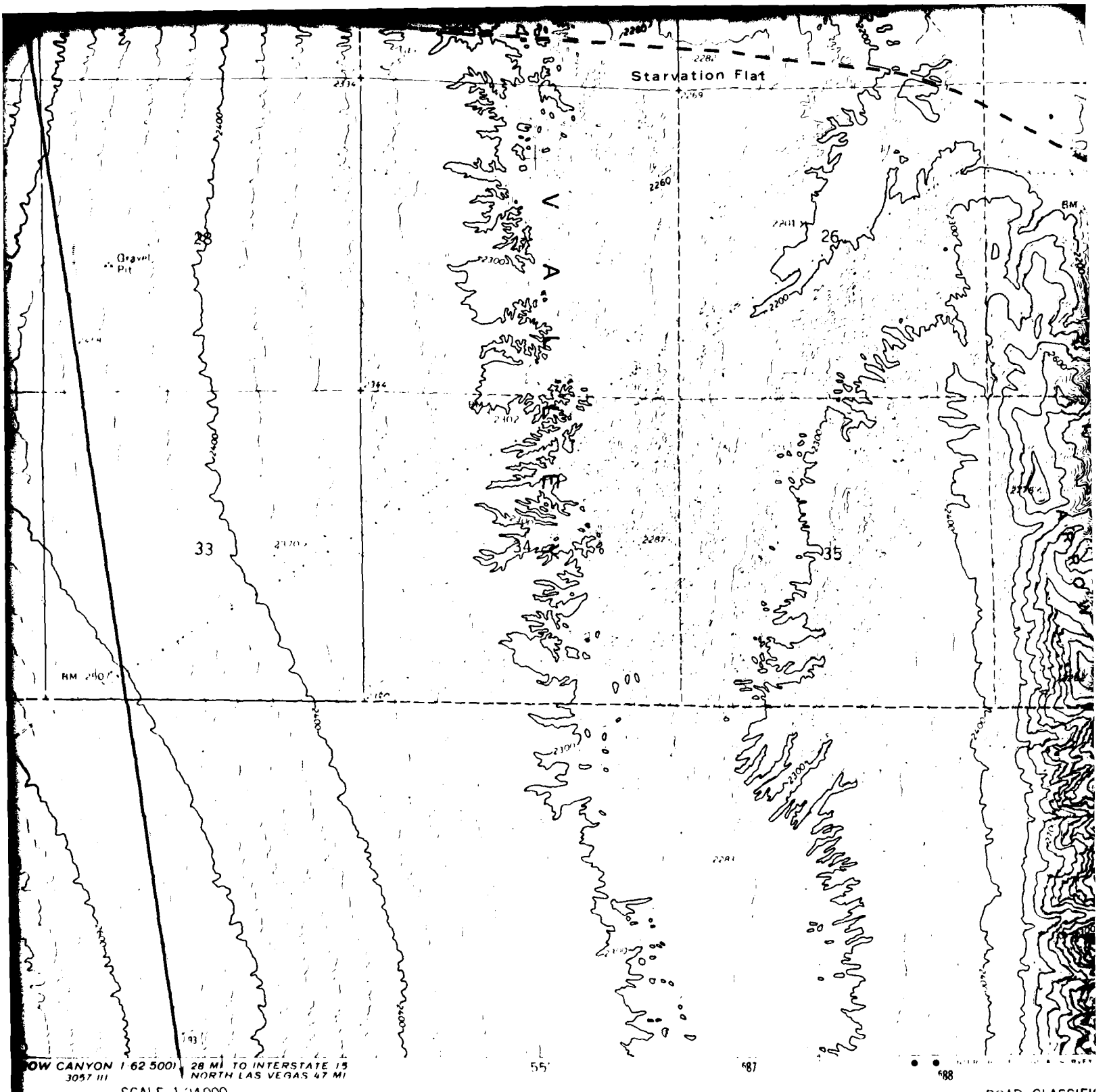

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COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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G TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

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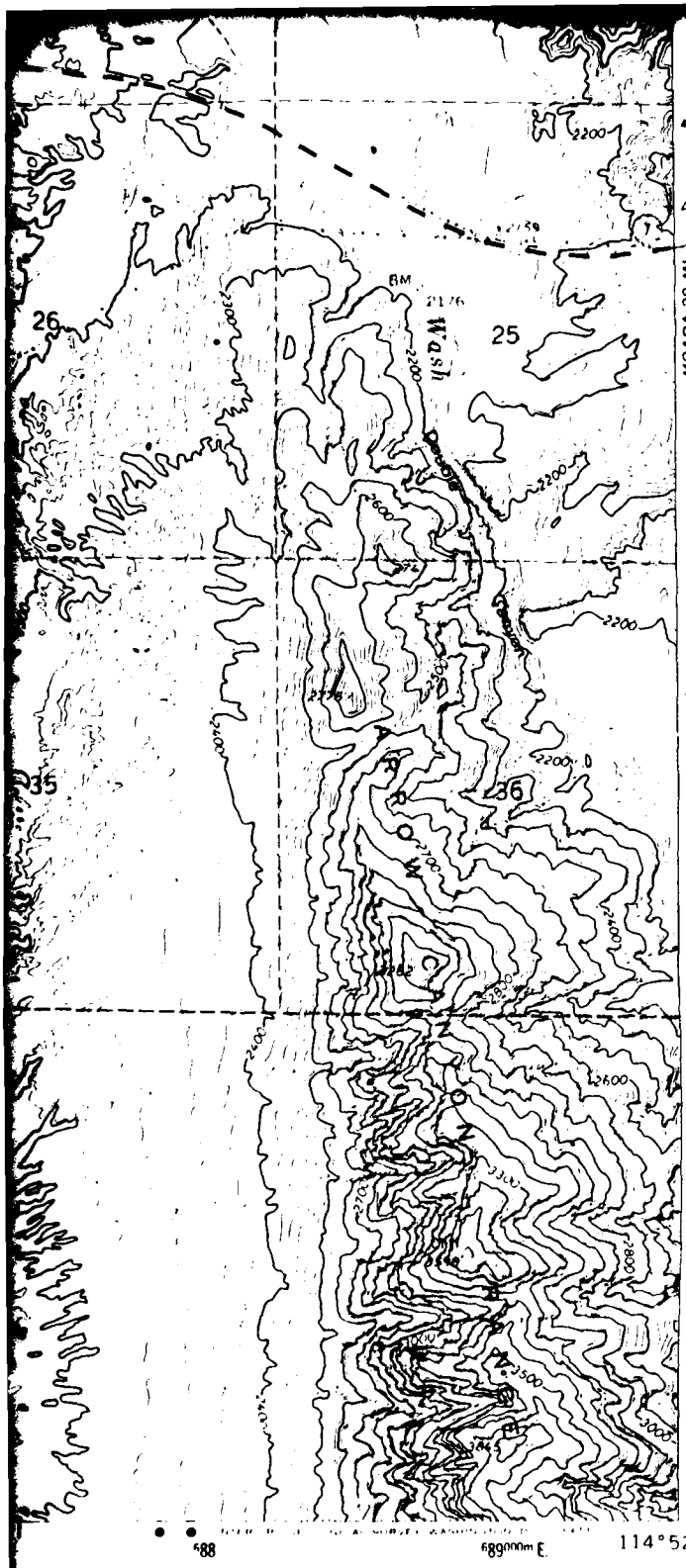

ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

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3057 III
(ARROW CANYON
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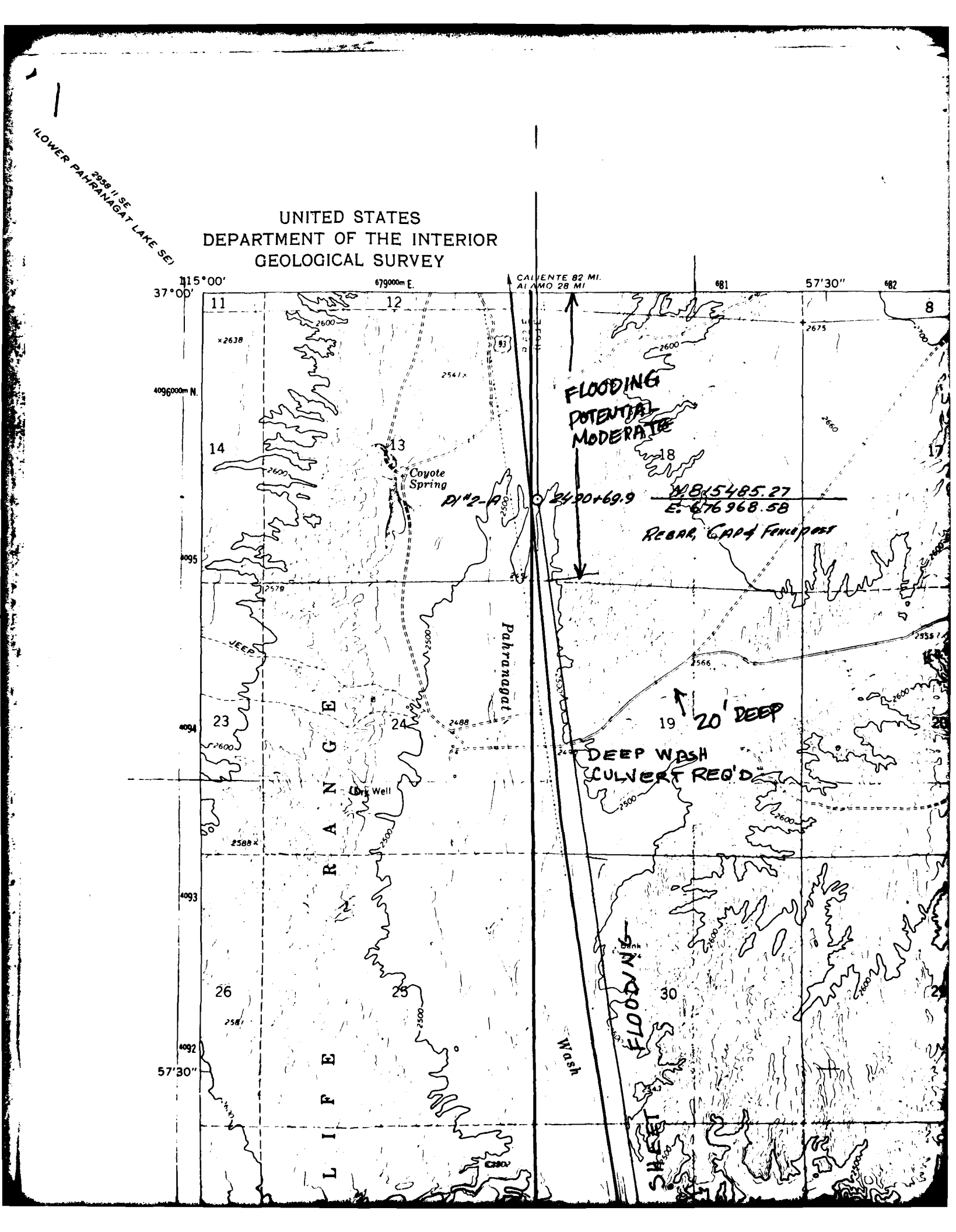
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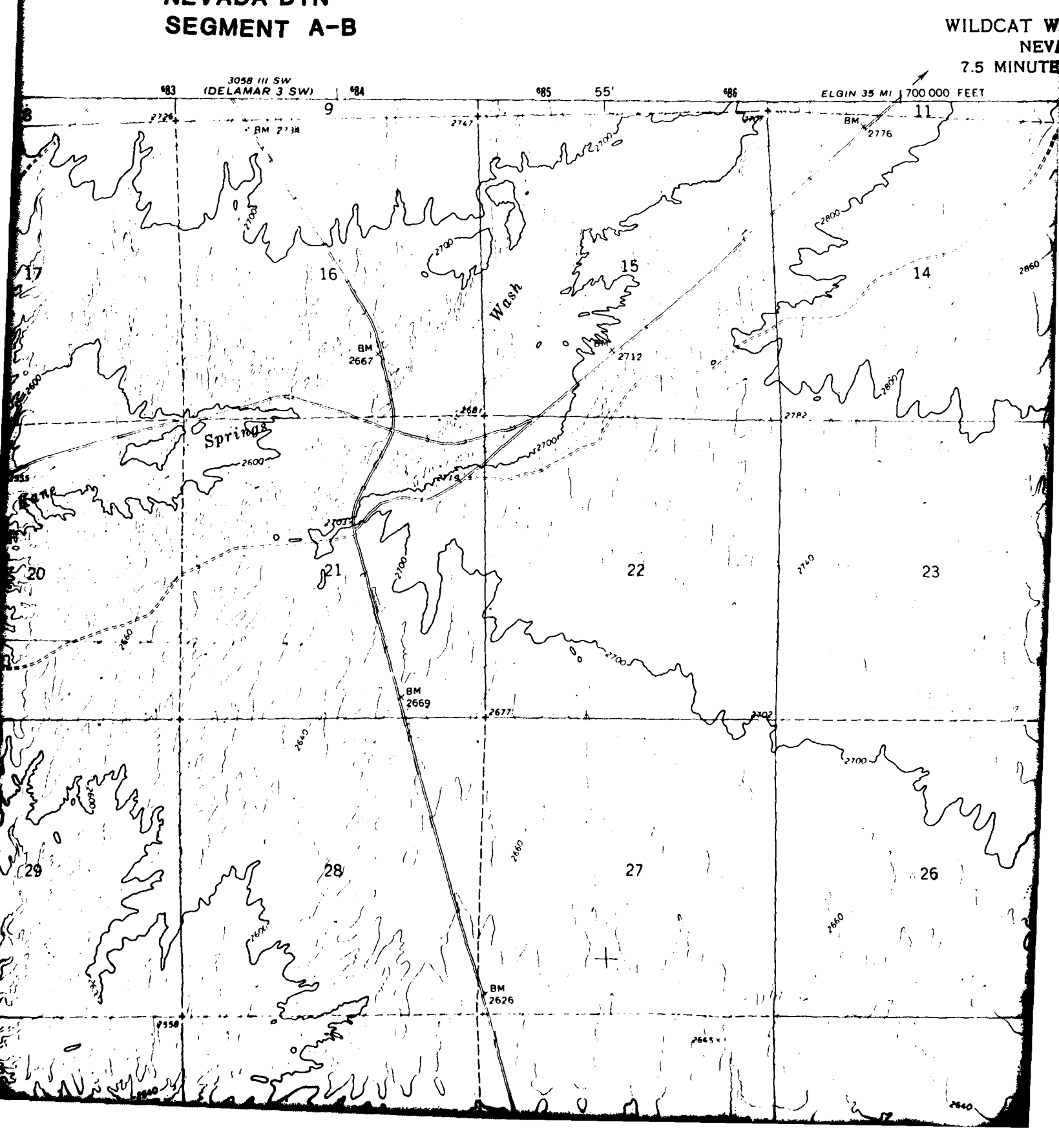
Pahranagat
Wash
FLOODING
SHEET
LIFE RANGE
JEEP
Dry Well
57'30"

2

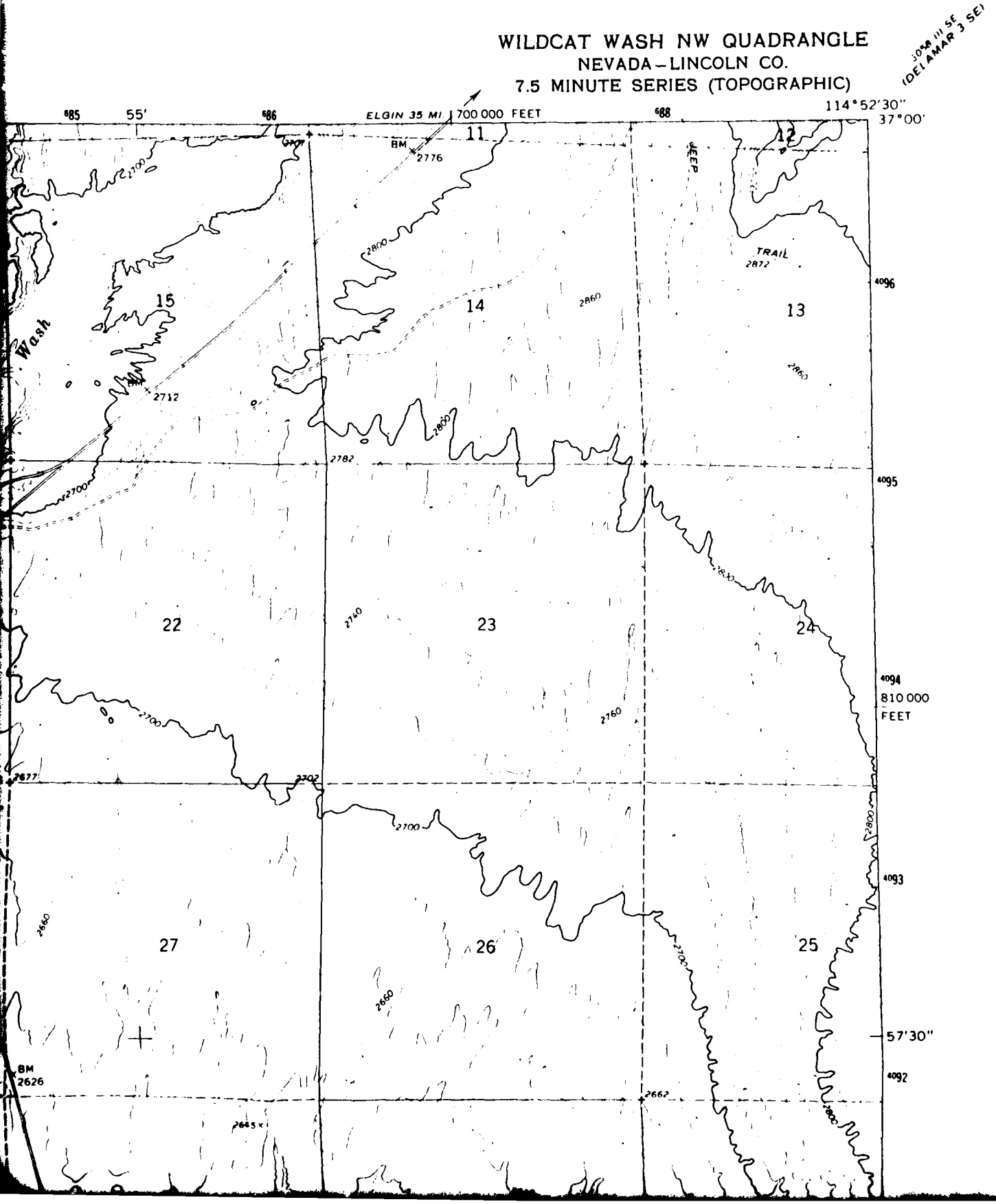
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B

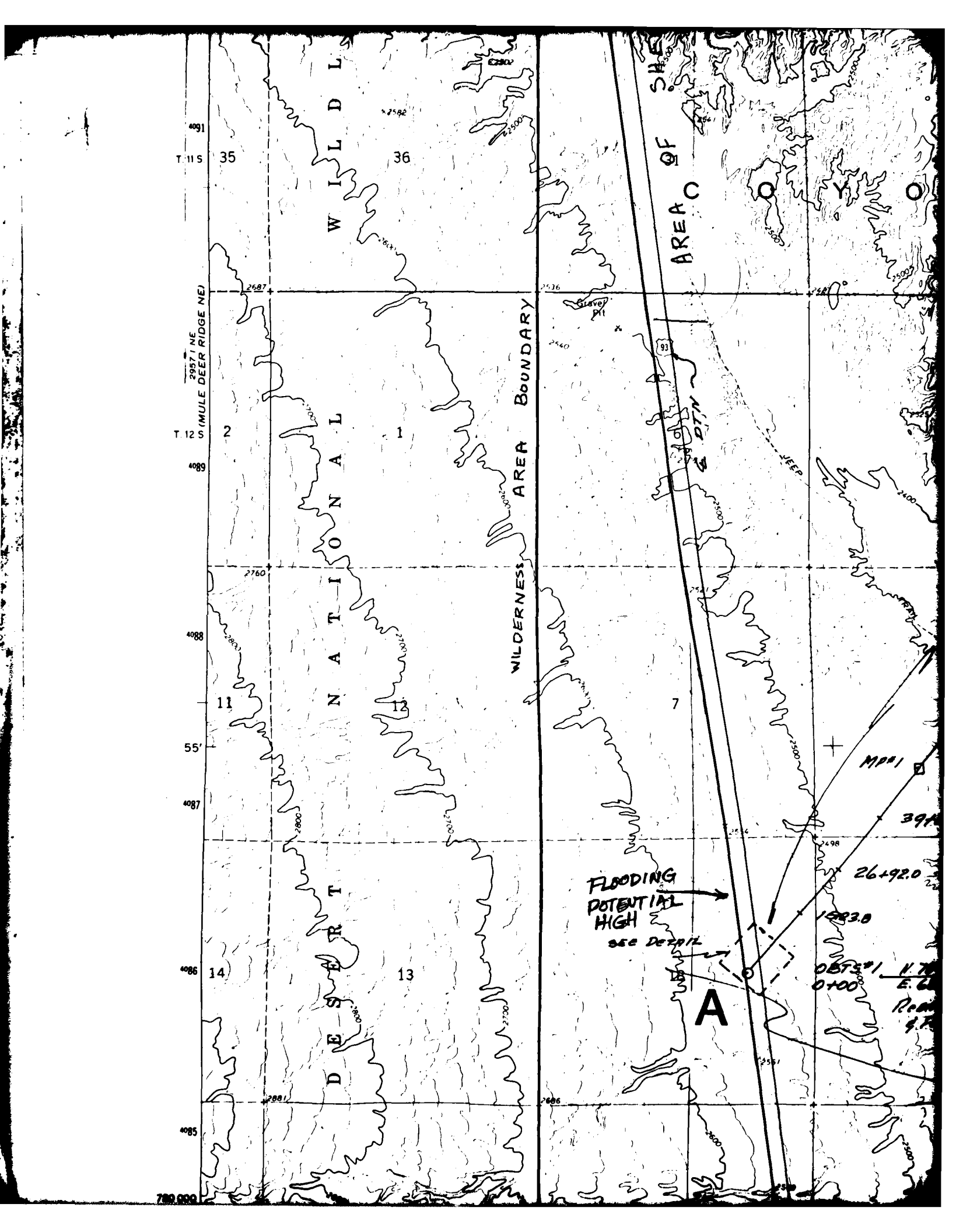


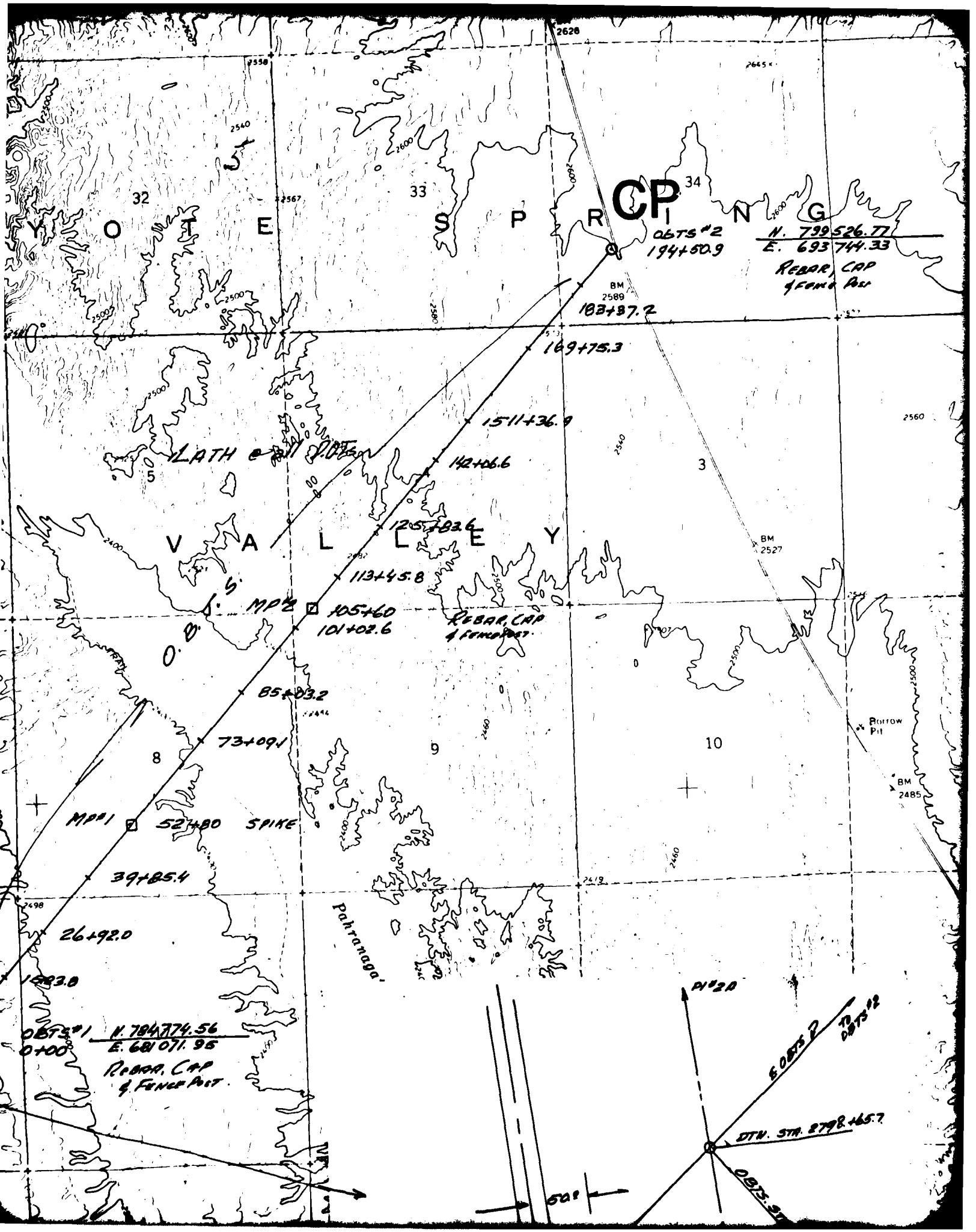
WILDCAT WASH NW QUADRANGLE

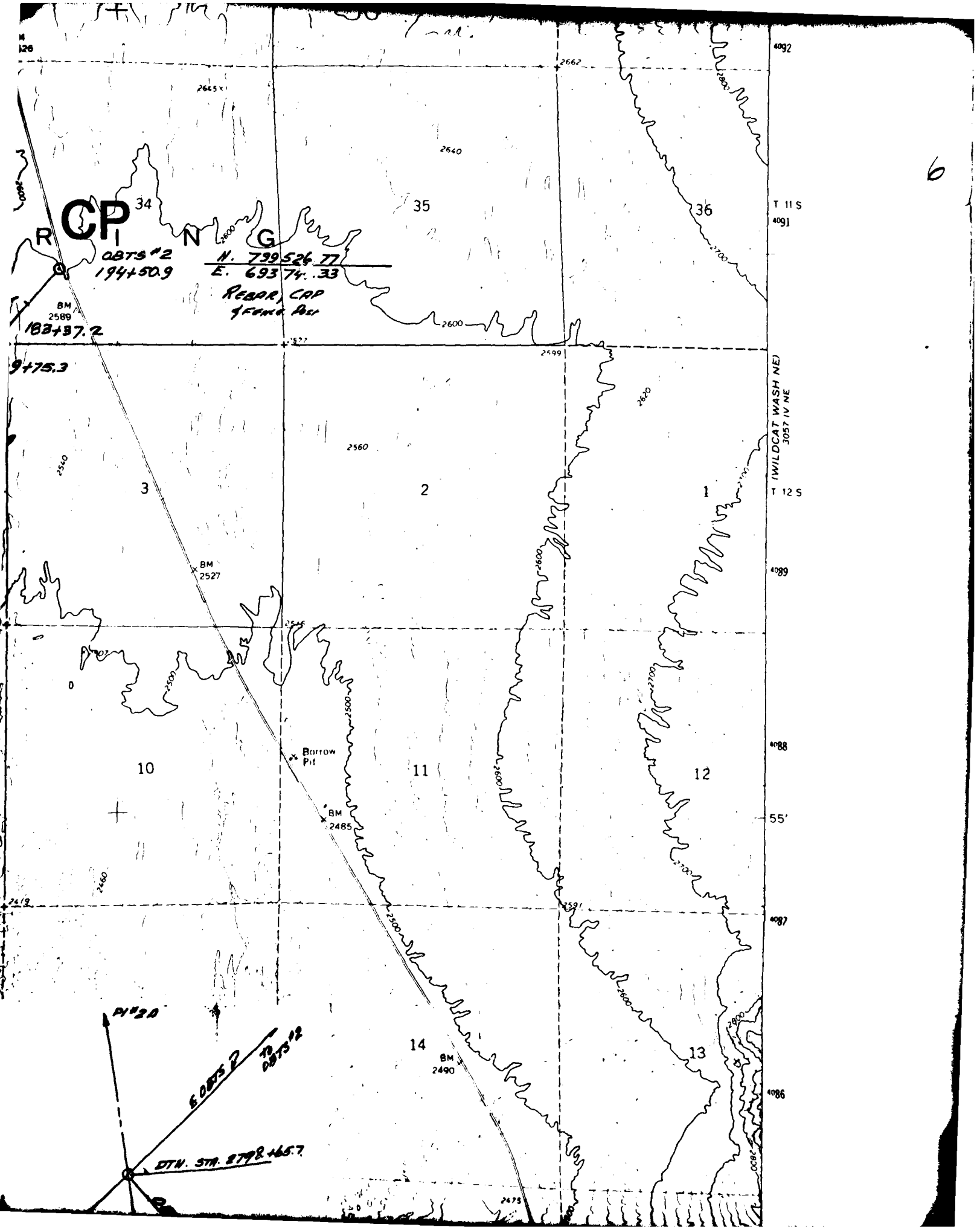
NEVADA – LINCOLN CO.

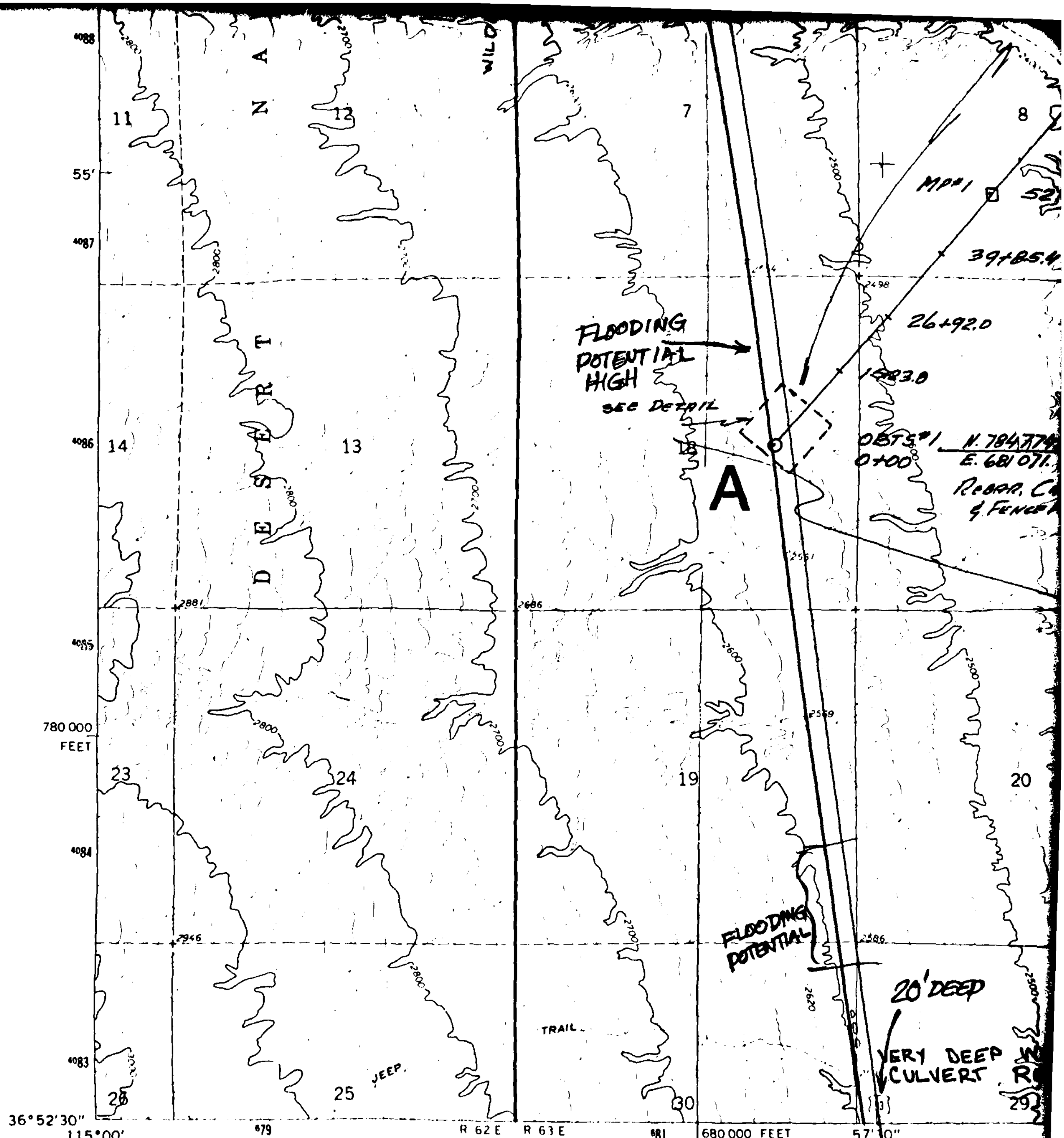
7.5 MINUTE SERIES (TOPOGRAPHIC)




WILDLIFE
NATIONAL
DESERT
WILDERNESS AREA BOUNDARY
AREA OF SHOYO
T. 11 S
T. 12 S
35
36
2
1
11
12
7
14
13
55'
4091
4089
4088
4087
4086
4085
2957 NE
(MULE DEER RIDGE NE)
93
DTN
JEEP
Gravel Pit
FLOODING POTENTIAL HIGH
see Detail
A
MP#1
26+92.0
OBT's#1
0+00
780,000


YUCCA SPRING
VALLEY
OBTS #2
194+50.9
N. 799526.77
E. 693744.33
REBAR, CAP
& FENCE POST
BM
2589
183+87.2
169+75.3
151+36.9
142+06.6
125+03.6
113+45.8
MP #2
105+60
101+02.6
REBAR, CAP
& FENCE POST.
85+03.2
73+09.1
MP #1
52+80
SPIKE
39+85.4
26+92.0
18+93.8
OBTS #1
0+00
N. 784774.56
E. 681071.95
REBAR, CAP
& FENCE POST.
Pahranagat
BM
2527
BM
2485
Borrow
Pit
PI #2.0
6 OBTS @
TO OBTS #2
OTN. STA. 8798+65.7
OBTS #1
50'
32
33
34
5
4
3
8
9
10


CP 1
OBTS #2
194+50.9
N. 799526.77
E. 6937[illegible].33
REBAR, CAP
4 FEET ASL
182437.2
9475.3
BM 2589
BM 2527
BM 2485
BM 2490
Borrow Pit
34
35
36
3
2
1
10
11
12
13
14
T 11 S
T 12 S
(WILDCAT WASH NE)
3057 IV NE
4092
4091
4089
4088
4087
4086
55'
PI #2.0
6 OBTS 2 TO OBTS 12
STN. STN. 8798.465.7



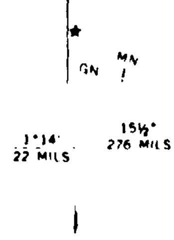
(MULE DEER RIDGE SE)
2957 I SE

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

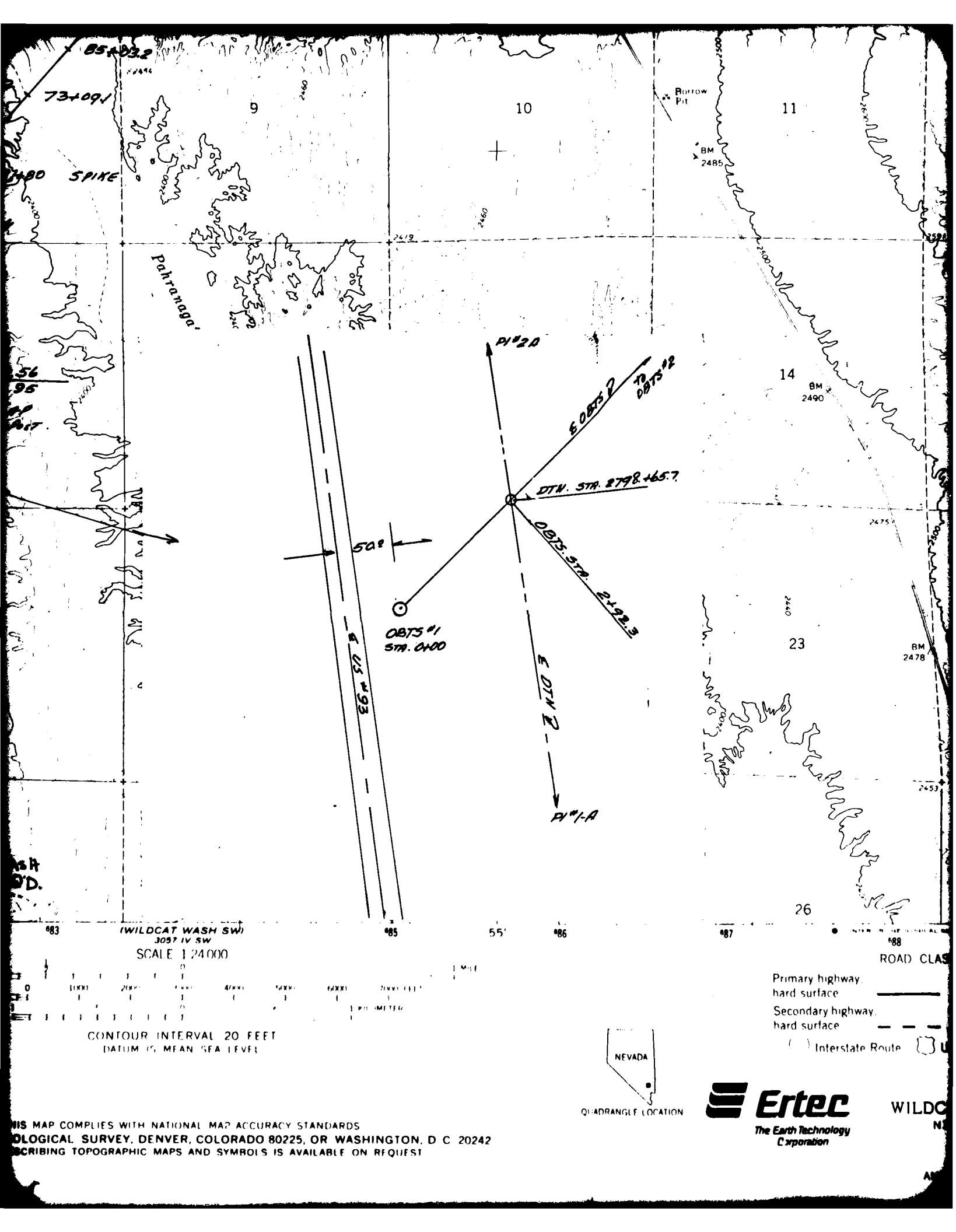
Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks,
zone 11, shown in blue

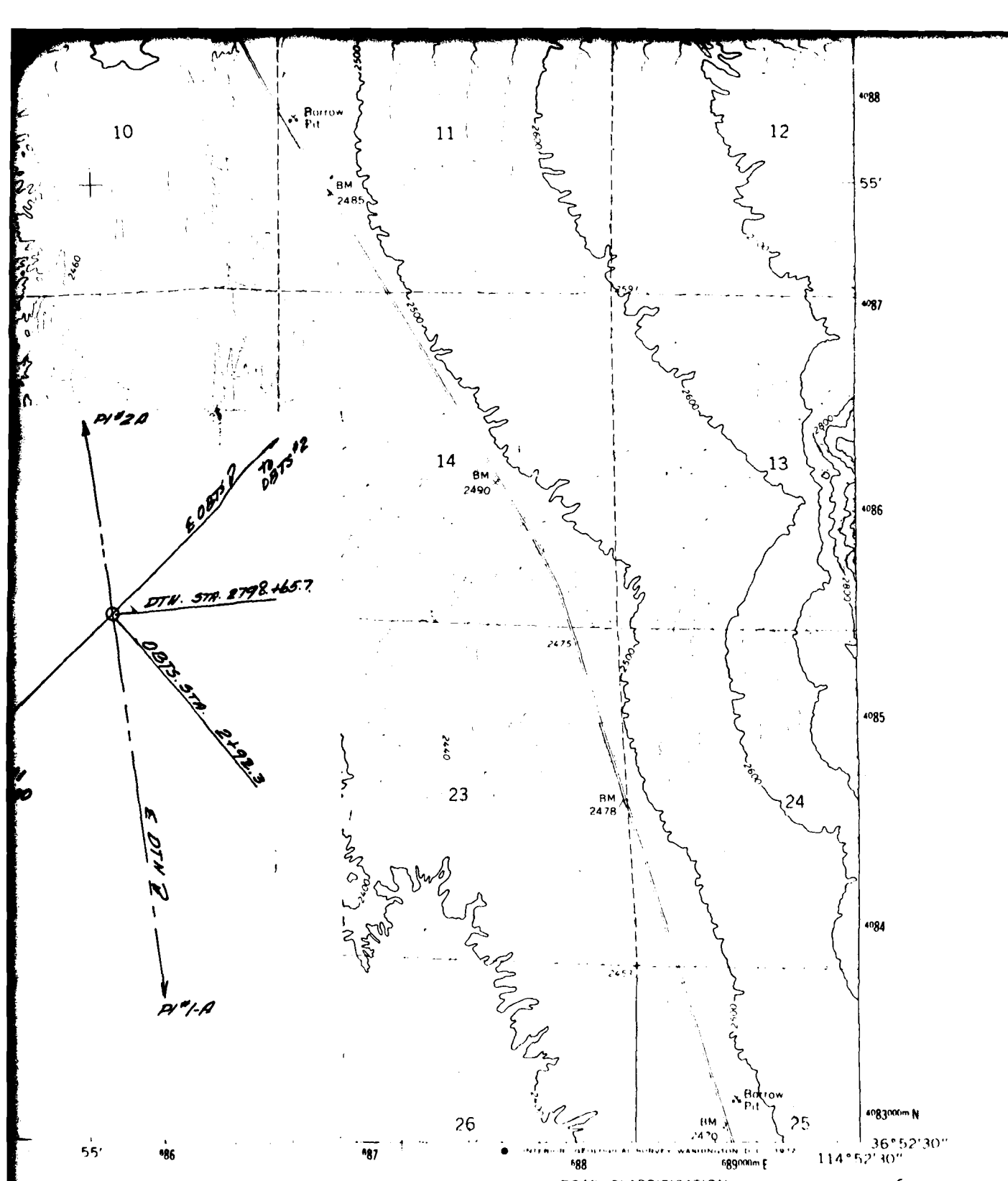


UTM GRID AND 1969 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

FOR SALE BY U.S.
A FOLDER



IS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
OLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D C 20242
SCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light duty road, hard or improved surface

Unimproved road

( ) Interstate Route ( ) U. S. Route ( ) State Route

NEVADA

QUADRANGLE LOCATION

Ertec

The Earth Technology Corporation

WILDCAT WASH NW, NEV.

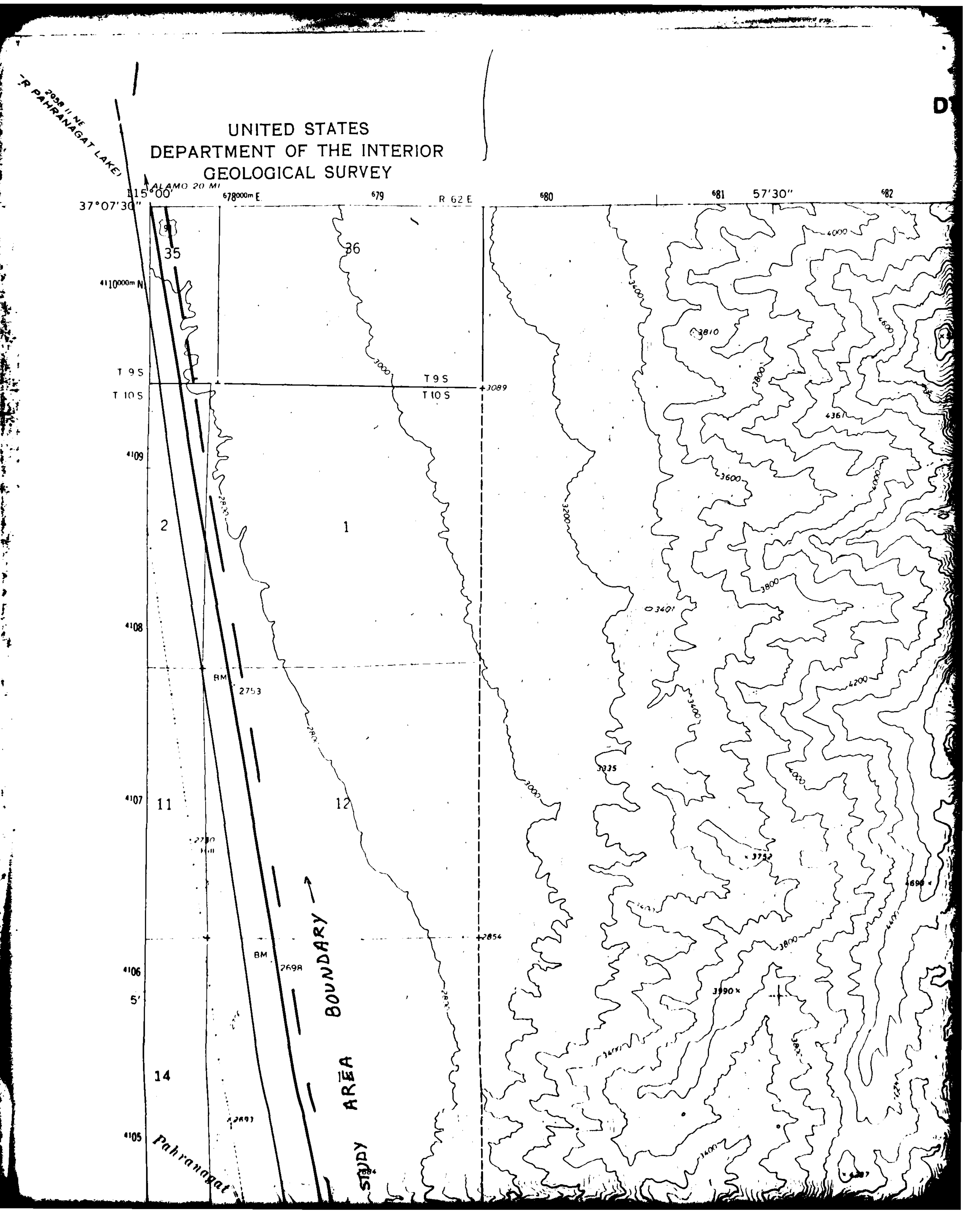
N3652.5—W11452.5/7.5

1969

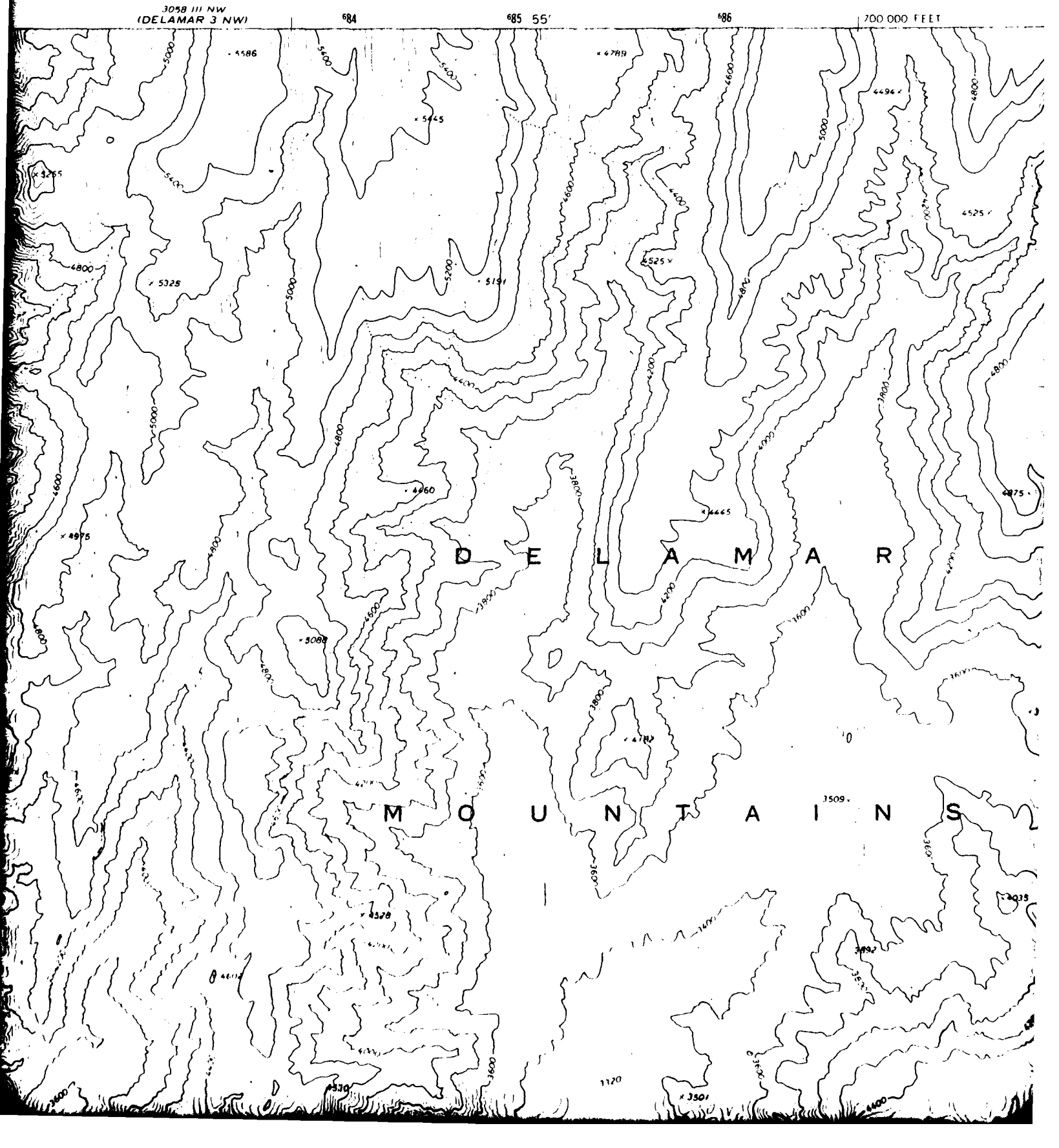
AMS 3057 IV NW—SERIES V896

C. 20242

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

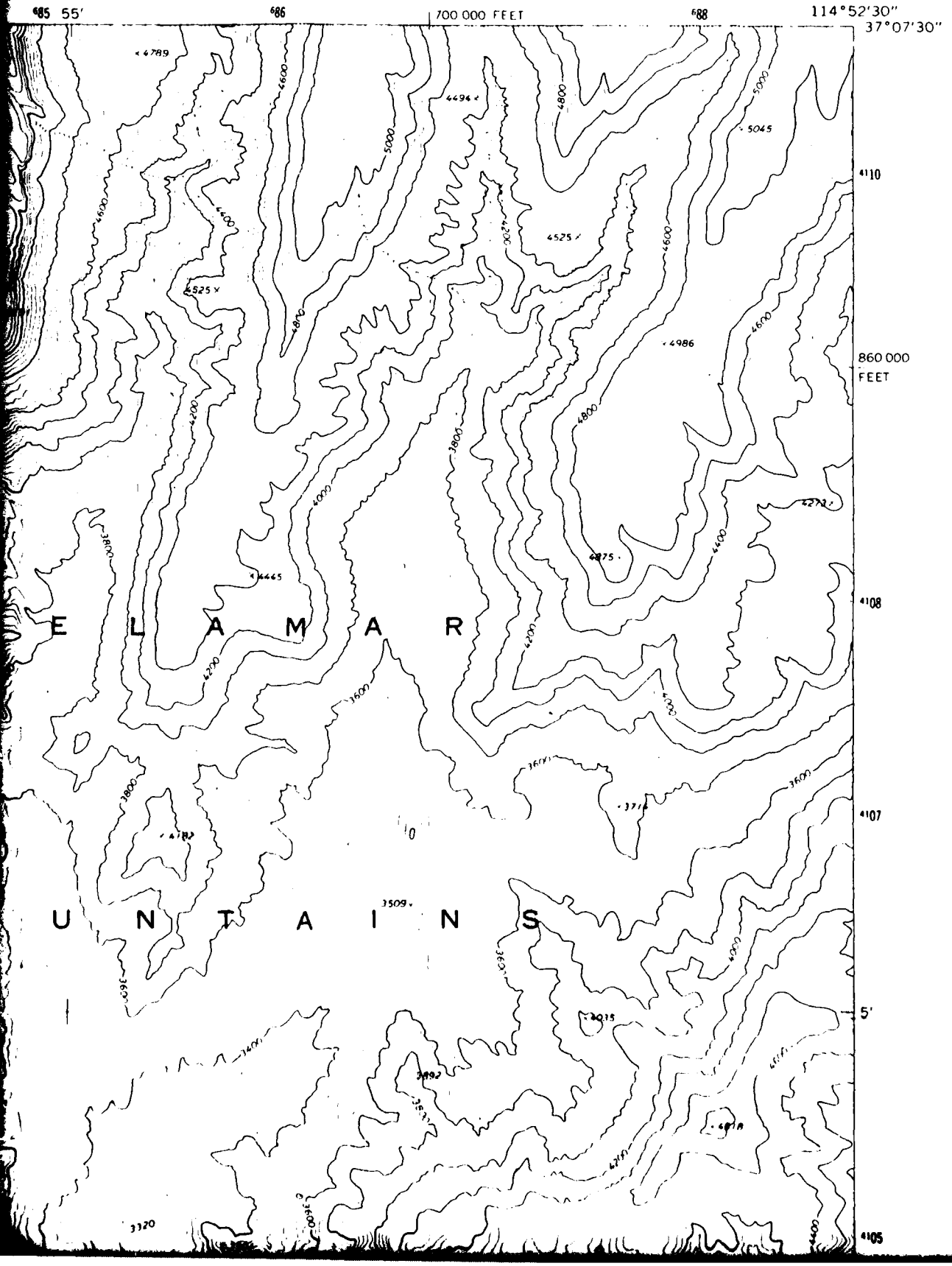


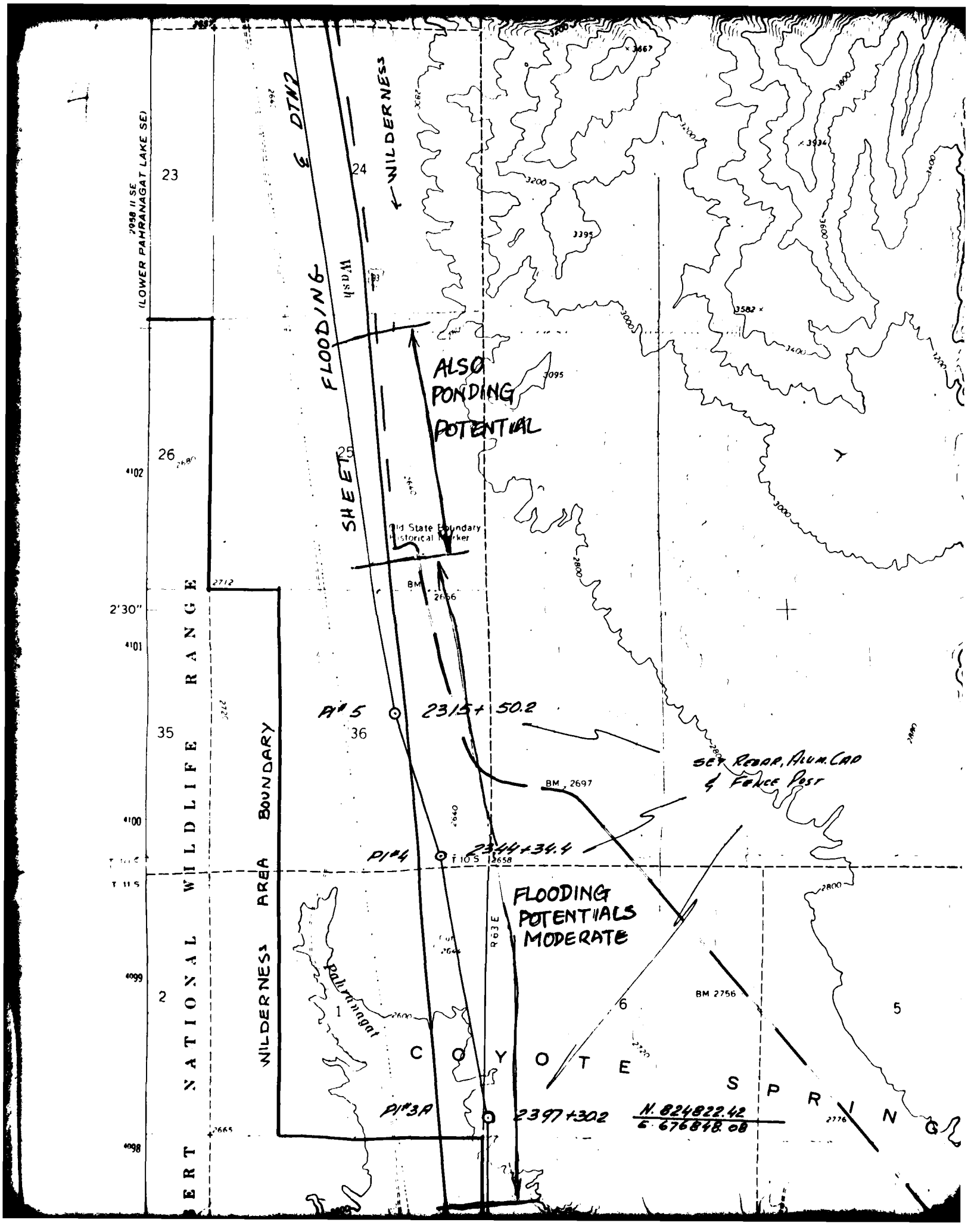
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B

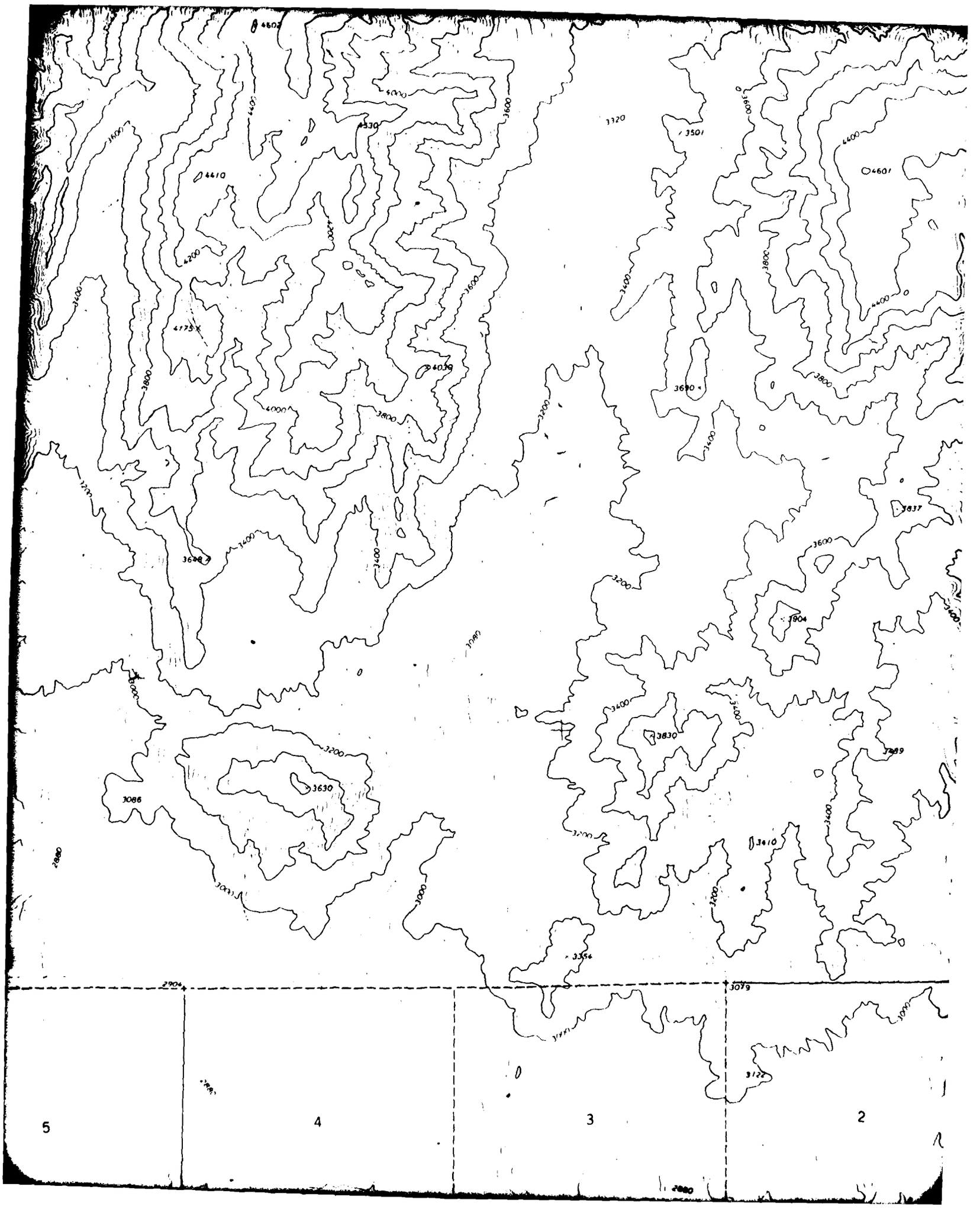


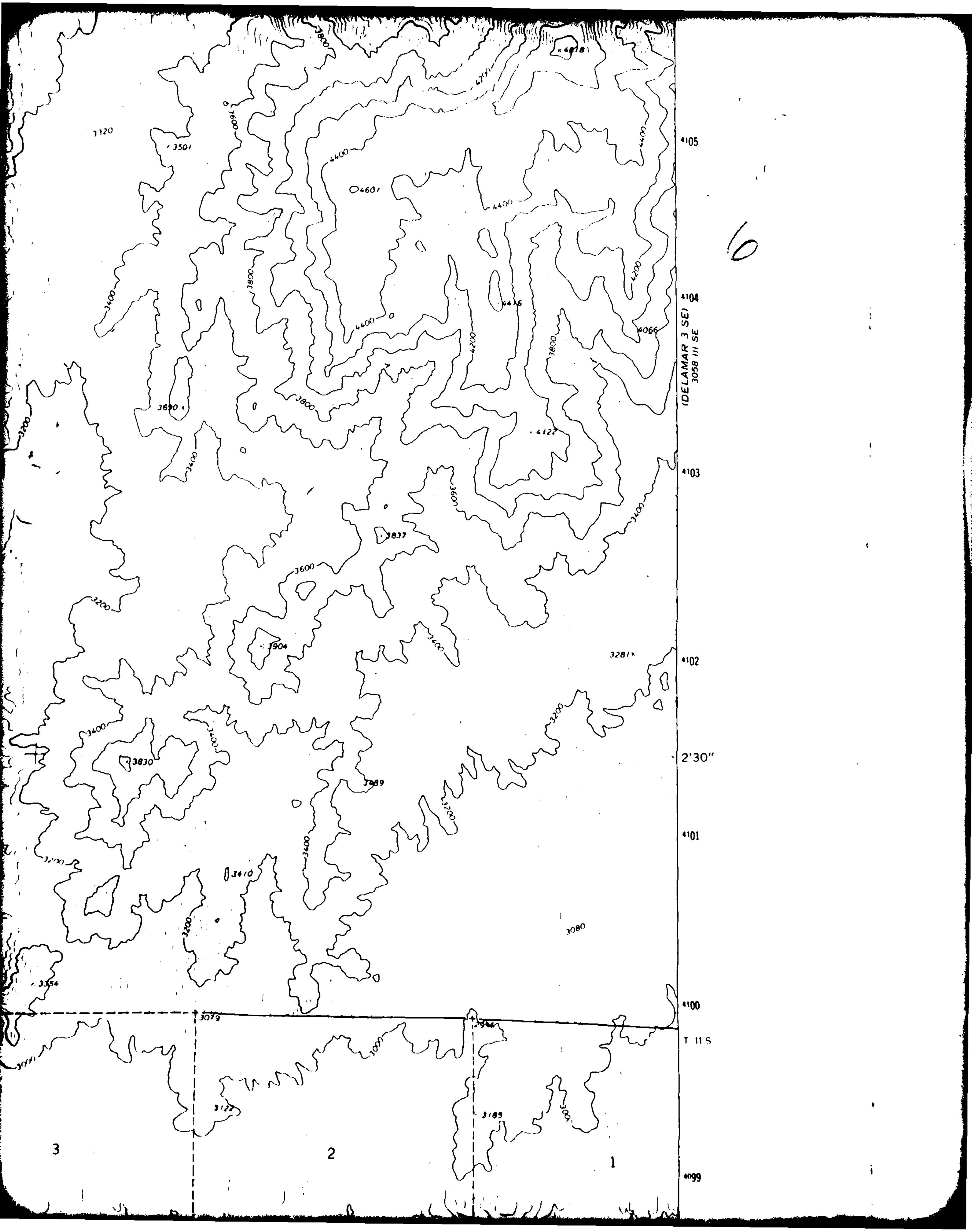
DELAMAR 3 SW QUADRANGLE
NEVADA—LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

3058 (II NE (DELAMAR 3 NE)

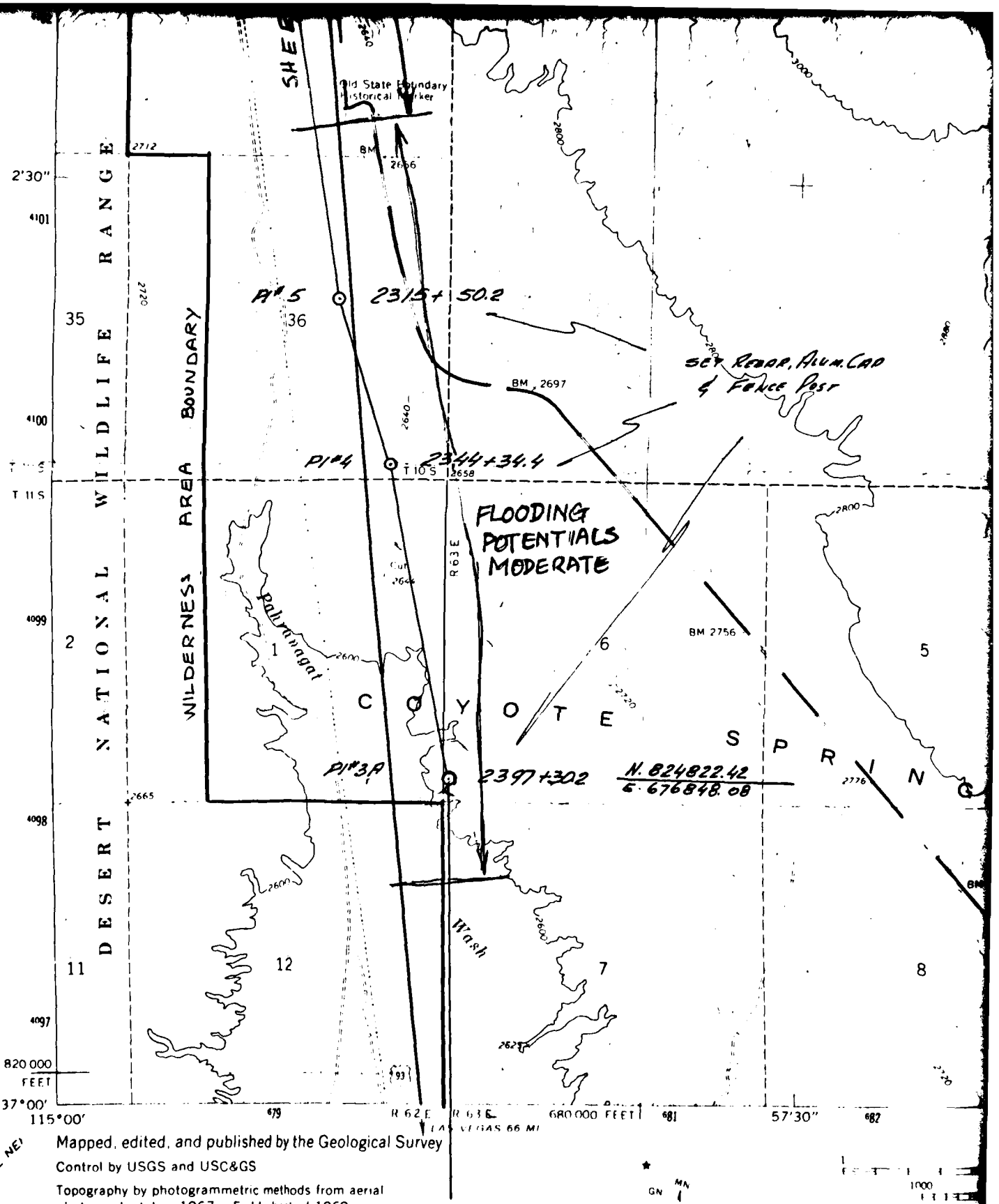



2958 II SE
(LOWER PAHRANAGAT LAKE SE)
23
24
25
26
35
36
2
1
6
5
R63E
T 11 S
T 10 S
WILDERNESS
FLOODING
SHEET
ALSO PONDING POTENTIAL
Old State Boundary Historical Marker
BM 2656
BM 2697
BM 2756
P#5 2315+50.2
P#4 2344+34.4
P#3A 2397+302
N. 824822.42
E. 676848.08
SET REBAR, ALUM. CAP & FENCE POST
FLOODING POTENTIALS MODERATE
COYOTE SPRING
WILDERNESS AREA BOUNDARY
DESERT NATIONAL WILDLIFE RANGE

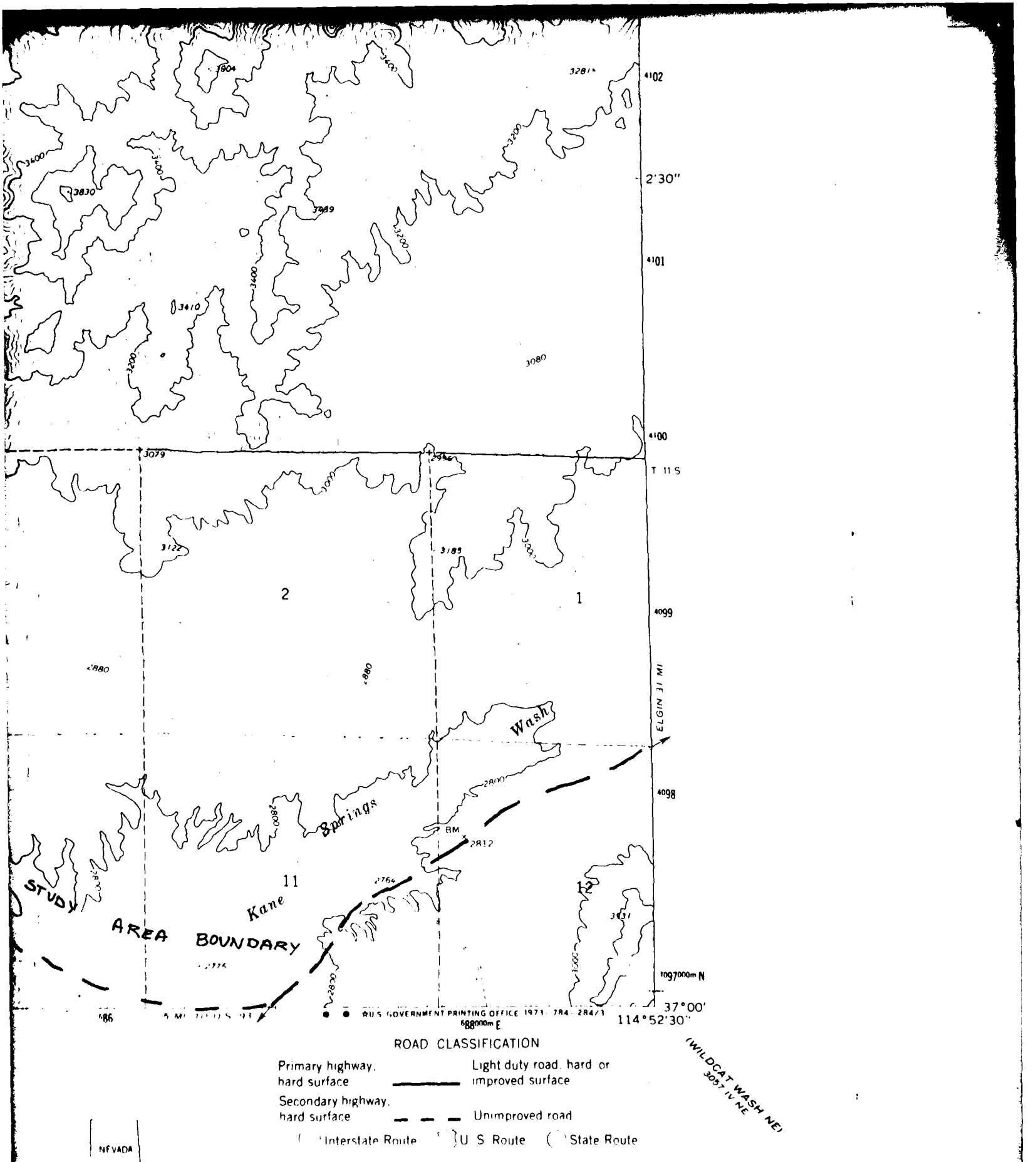

5
4
3
2



4105
4104
4103
4102
2'30"
4101
4100
4099
T 11 S
(DELAMAR 3 SE)
3058 III SE
3 2 1
4601
4416
4066
4122
3837
3904
3830
3689
3410
3501
3690
3281
3080
3079
3122
3189
3354
3320
6


Old State Boundary Historical Marker
BM 2656
2'30"
4101
35
36
WILDERNESS AREA BOUNDARY
DESERT NATIONAL WILDLIFE RANGE
Pt#5 2315+50.2
SET REBAR, ALUM. CAP & FENCE POST
BM 2697
4100
Pt#4 2344+34.4
T 10 S
T 11 S
FLOODING POTENTIALS MODERATE
R63E
Paiutnagat
4099
2
1
6
BM 2756
5
COYOTE SPRING
Pt#3A 2397+302
N. 824822.42
E. 676848.08
4098
11
12
7
8
Wash
4097
820 000 FEET
37°00'
115°00'
679
R 62 E
R 63 E
680 000 FEET
681
57'30"
682
LAS VEGAS 66 MI
JLE DEER RIDGE NE
2957 I NE
Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969
Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue
Where omitted, land lines have not been established
GN
MN
1°14'
22 MILS
15½°
276 MILS
UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
FOR SALE BY U.S.
A FOLDE

VALLEY WILDERNESS STUDY AREA BOUNDARY
4
3
2
9
10
11
Kane Springs
Wash
Hwy Mon 10
2755
3630
3830
3689
3410
3354
3079
3122
3185
2880
2812
2764
2775
(WILDCAT WASH NW)
3057 IV NW
SCALE 1 24000
0
1 MILE
2000 3000 4000 5000 6000 7000 FEET
0
1 KILOMETER
CONTOUR INTERVAL 40 FEET
LINES REPRESENT 20 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light duty road, improved surface
Unimproved road
Interstate Route
U S Route
NEVADA
QUADRANGLE LOCATION
Ertec
The Earth Technology Corporation
DELAMAR
N3700 —
LIES WITH NATIONAL MAP ACCURACY STANDARDS
SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
OPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



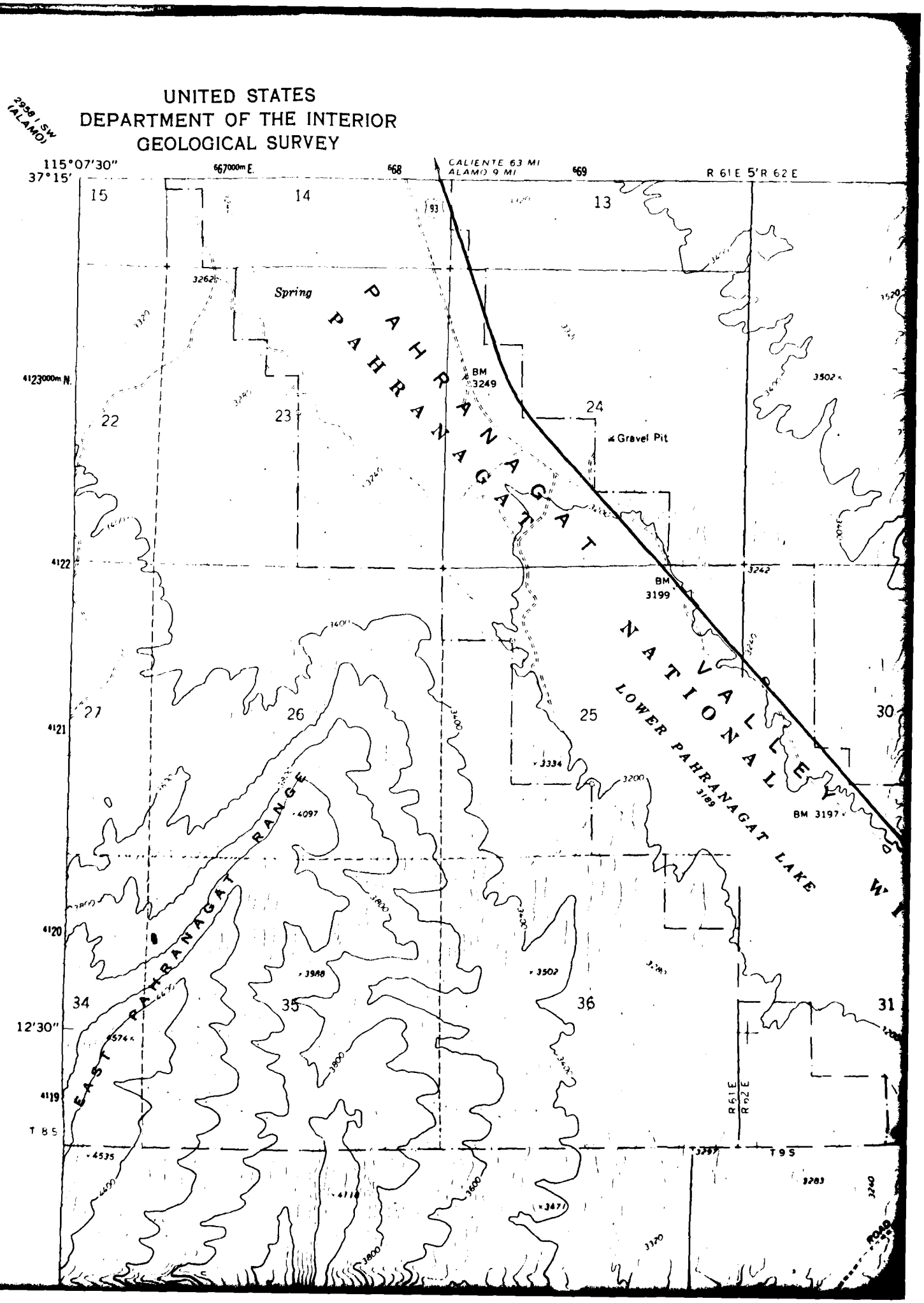
● ● ★U.S. GOVERNMENT PRINTING OFFICE 1973 - 784-284/3

Ertec
The Earth Technology Corporation

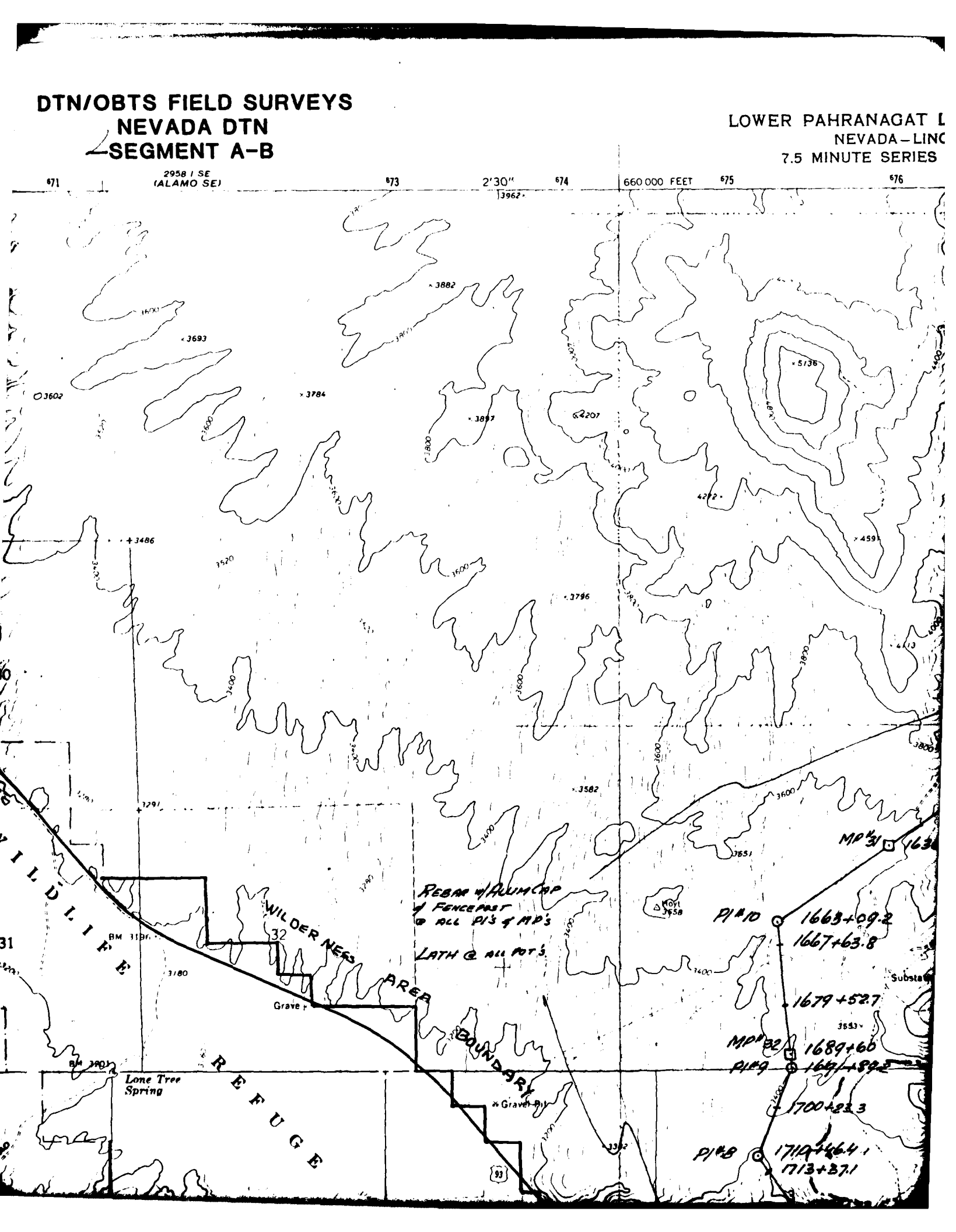
DELAMAR 3 SW, NEV.

N3700 W11452 5/7 5

1969


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
2998 I SW
(ALAMO)
115°07'30"
37°15'
667000m E.
668
669
CALIENTE 63 MI
ALAMO 9 MI
R 61 E 5'R 62 E
15
14
13
Spring
PAHRANAGAT
BM
3249
4123000m N.
22
23
24
Gravel Pit
4122
BM
3199
3242
NATIONAL
LOWER PAHRANAGAT LAKE
27
26
25
30
4121
3334
3200
3189
BM 3197
4097
EAST PAHRANAGAT RANGE
4120
3998
3502
34
35
36
31
12'30"
4574
4119
R61E
R62E
T 8 S
T 9 S
4535
4118
3471
3283
3240
3220
ROAD

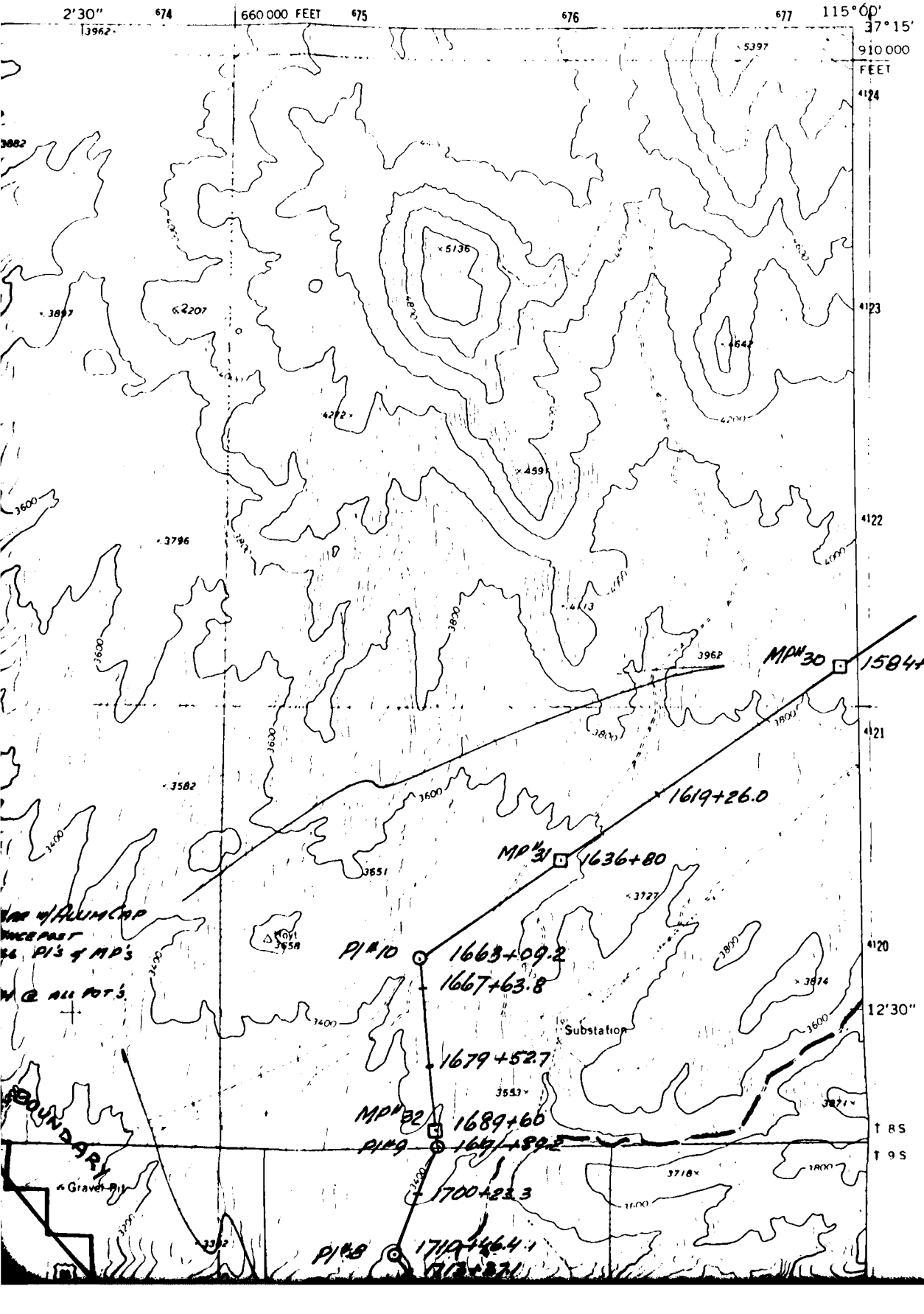
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B

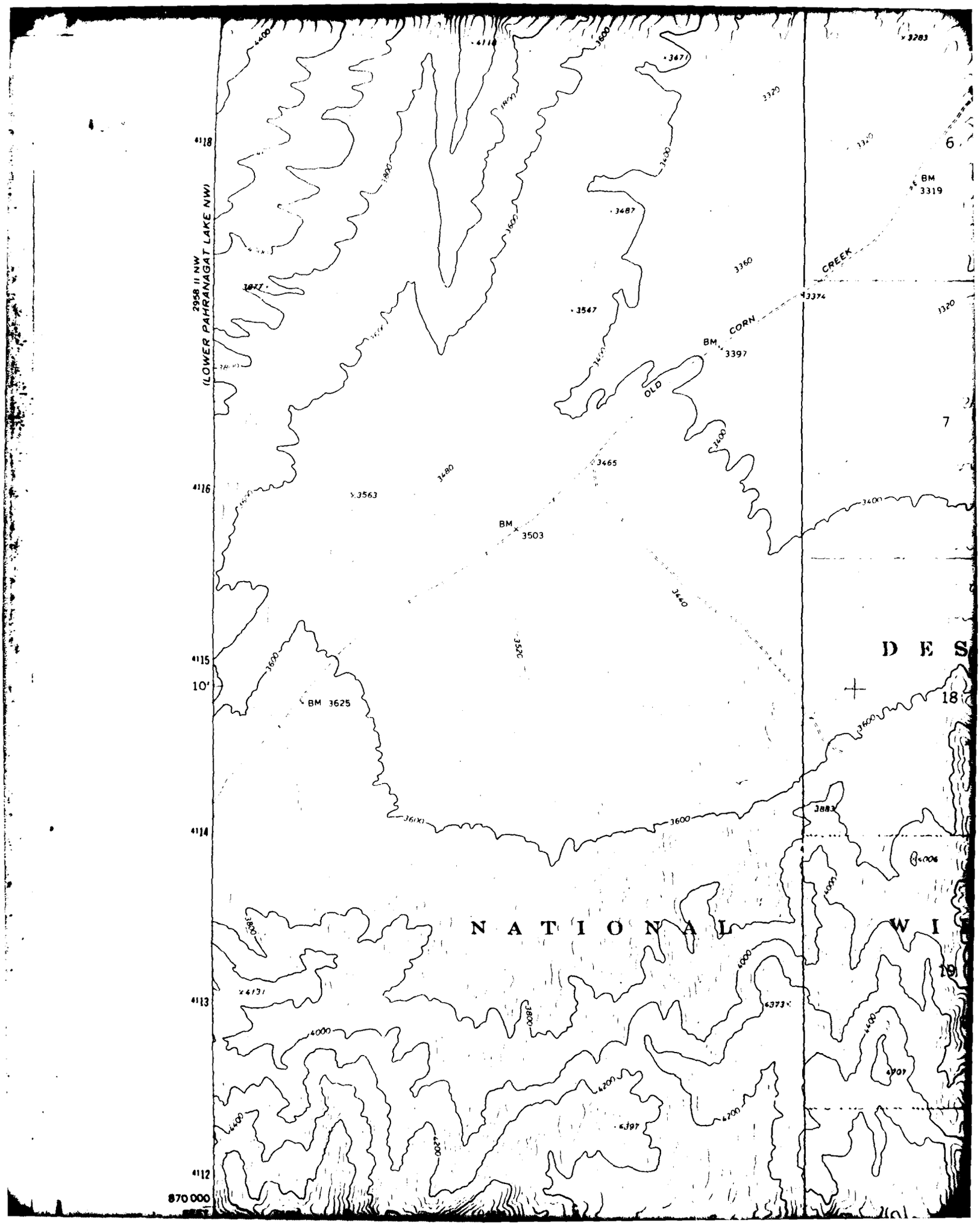


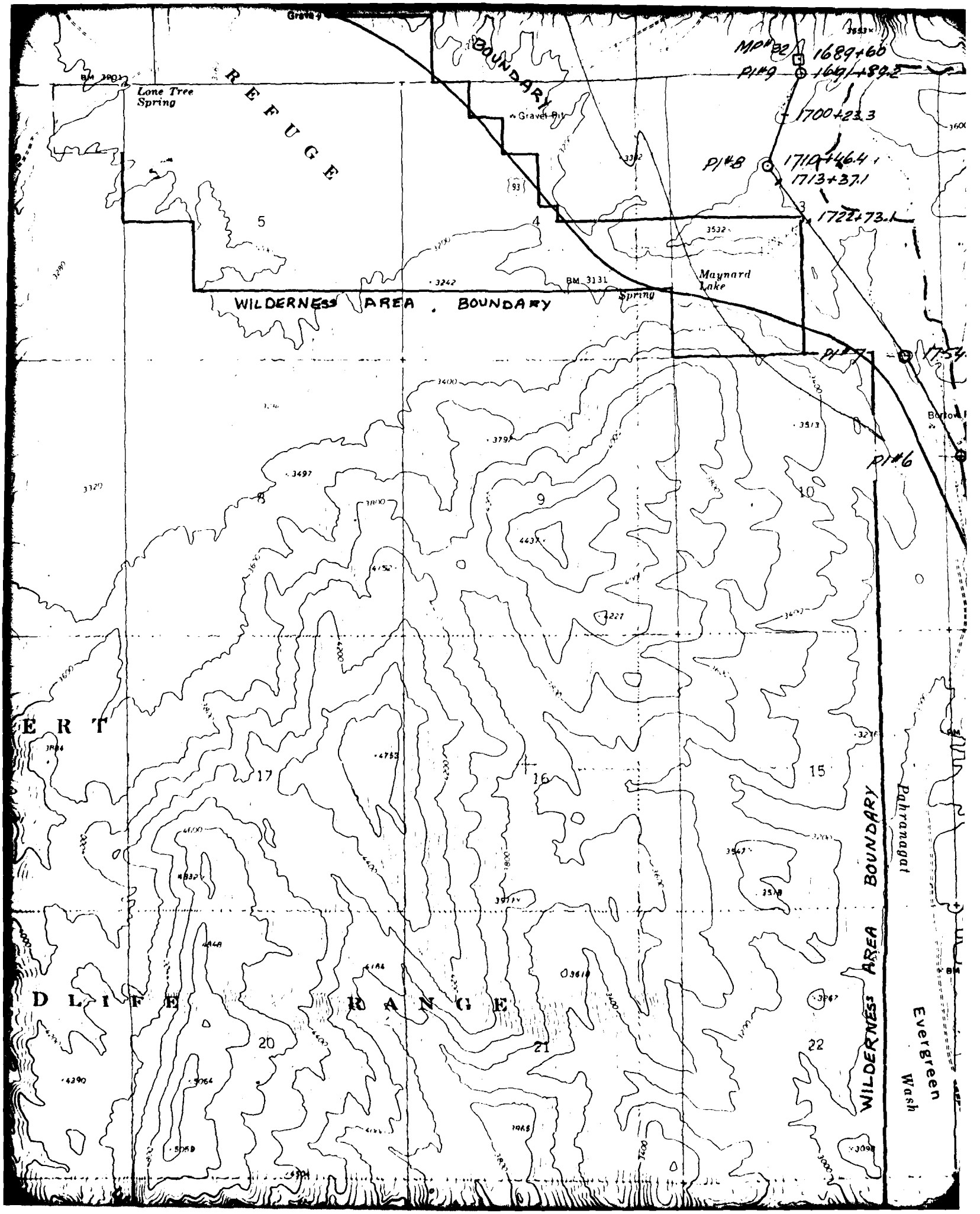
3058 IV SW (DELAMAR LAKE)

3

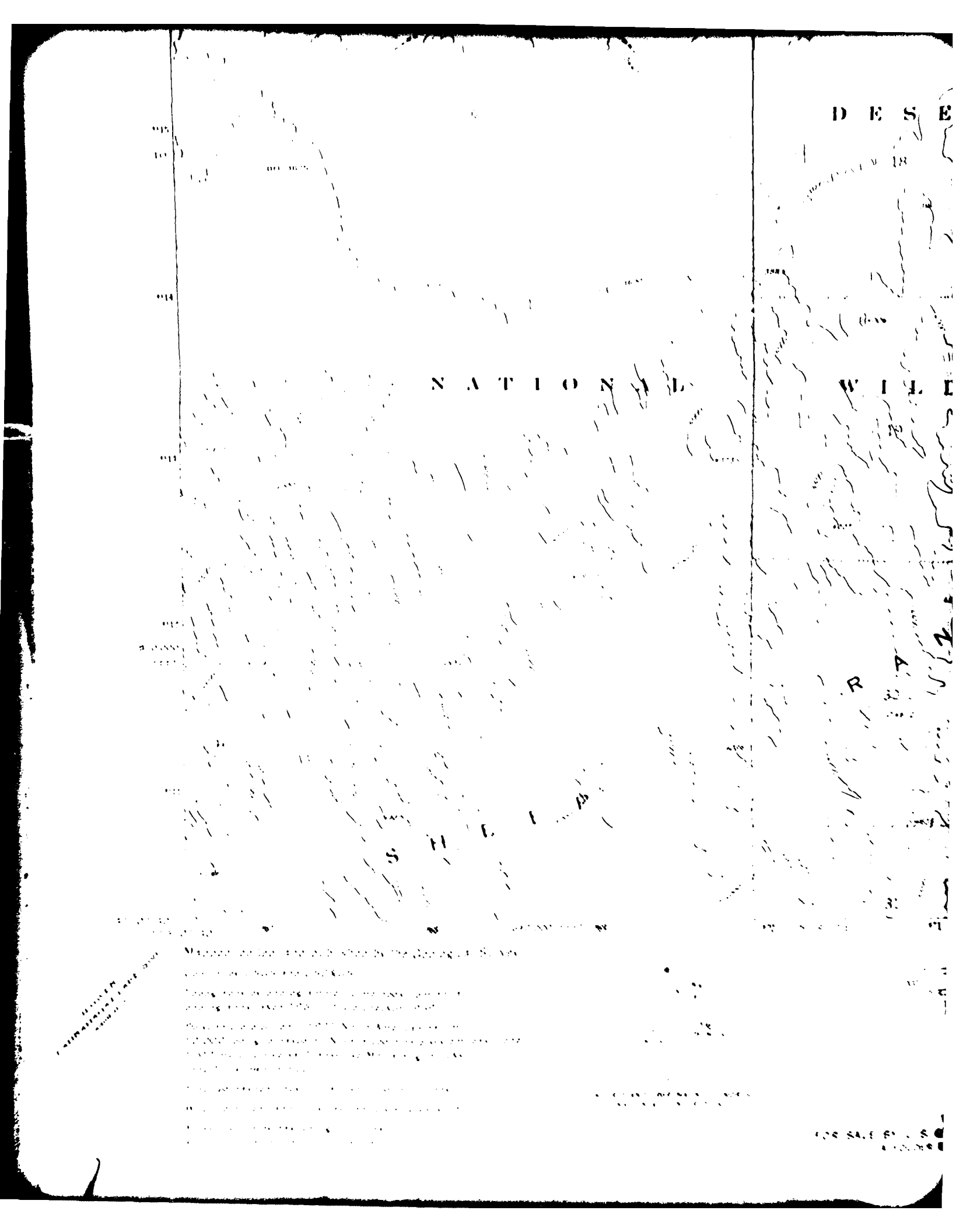
LOWER PAHRANAGAT LAKE QUADRANGLE
NEVADA—LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

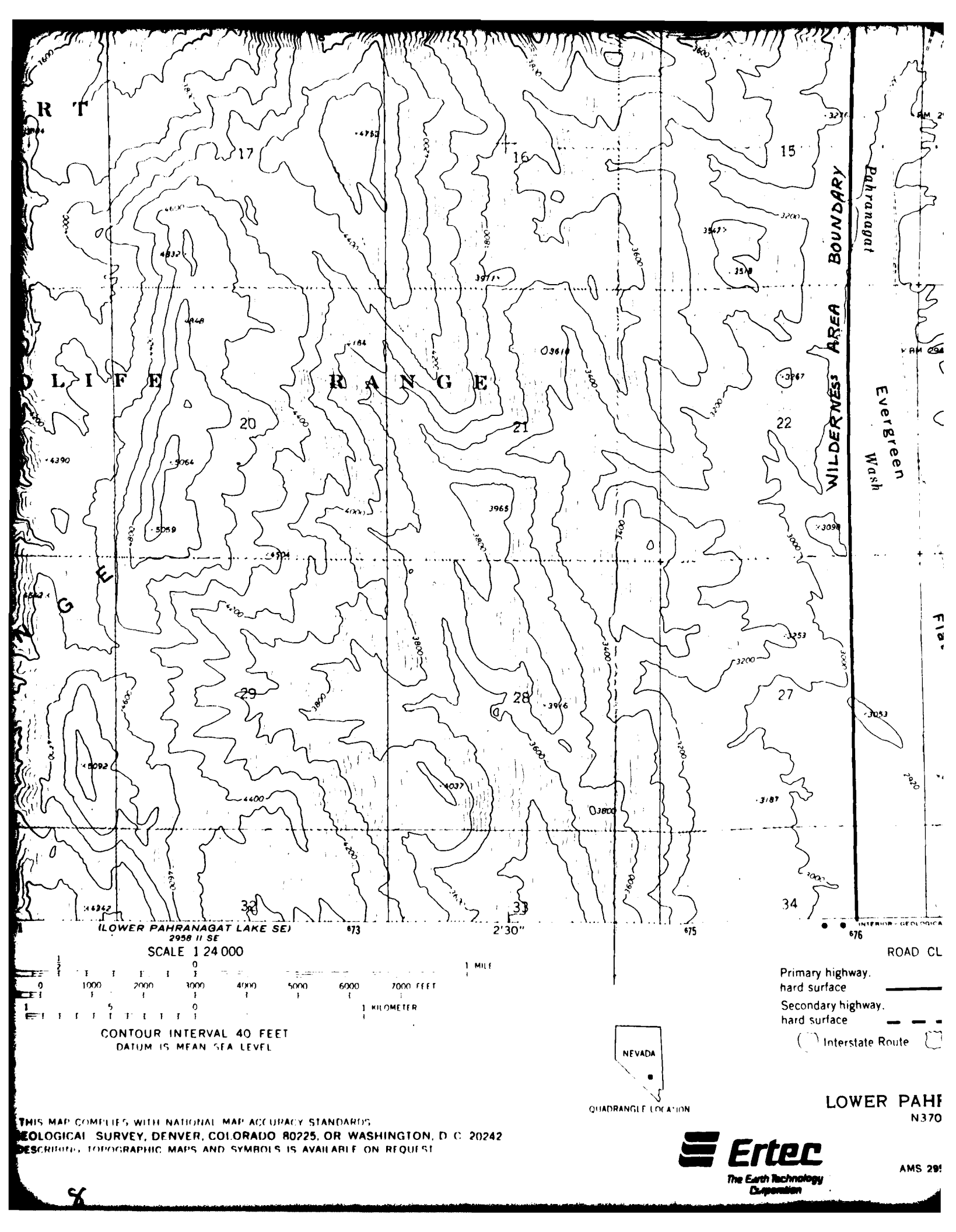


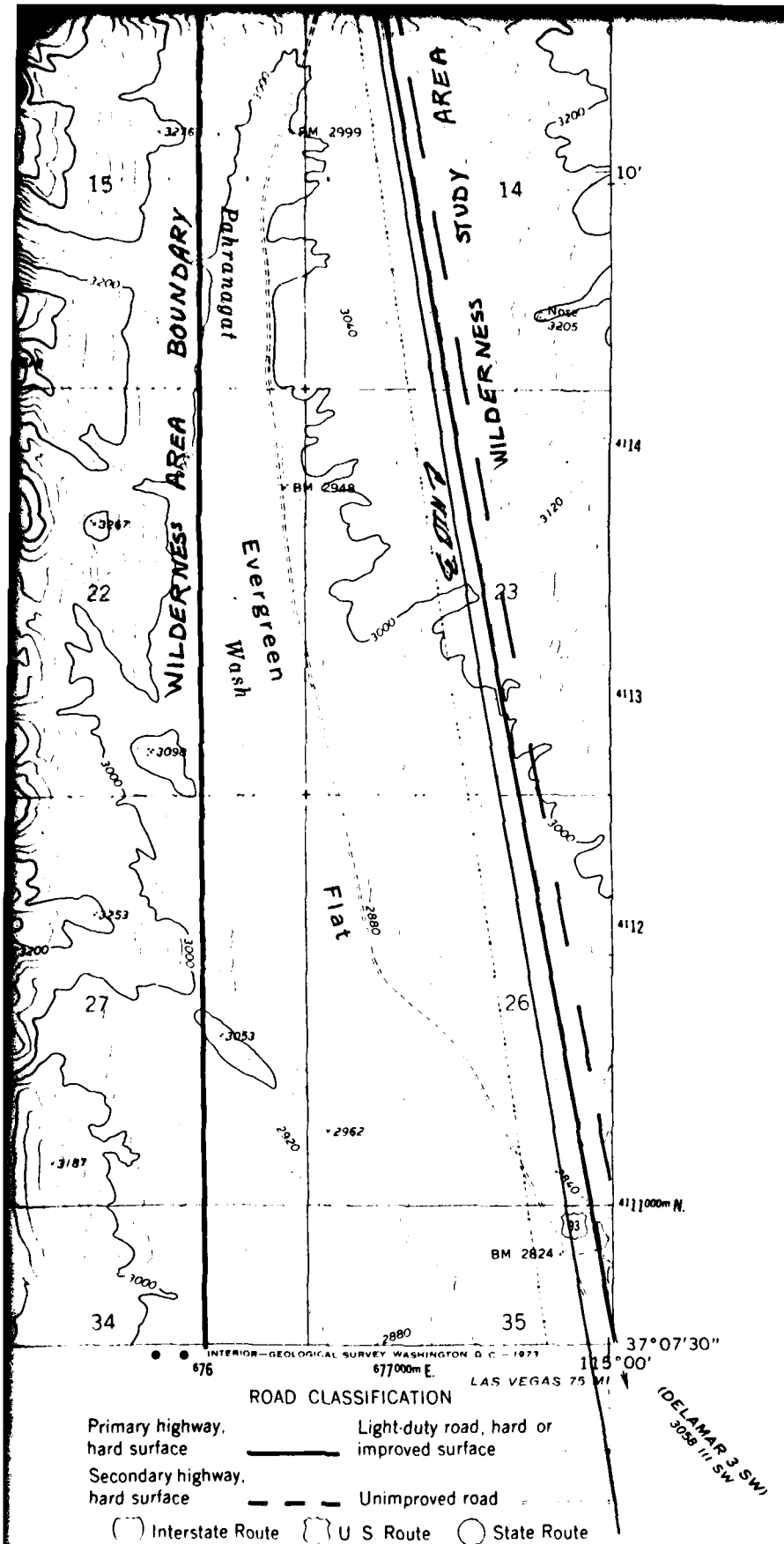

2958 II NW
(LOWER PAHRANAGAT LAKE NW)
BM 3319
CREEK
BM CORN
3397
OLD
BM 3503
BM 3625
NATIONAL
4118
4116
4115
4114
4113
4112
10'
870 000
6
7
18
19


REFUGE
BOUNDARY
Lone Tree Spring
Gravel Pit
MP #2
1689+66
P/#9
1691+89.2
1700+23.3
P/#8
1711+46.4
1713+37.1
1722+73.1
WILDERNESS AREA BOUNDARY
Maynard Lake
Spring
BM 3131
P/#7
P/#6
Borrow
E R T
D L I F E R A N G E
WILDERNESS AREA BOUNDARY
Pahranagat
Evergreen
Wash

MP 82
1689+66
P#9
1699+89.2
1700+23.3
P#8
1710+46.4
1713+37.1
1722+73.1
P#7
1754+75.9
P#6
1776+97.1
1784+80.4
BOUNDARY
Gravel Pit
BM 3131
Maynar
Lake
Spring
Borrow Pits
BM 2999
BM 2948
Pahranagat
Evergreen
Wash
WILDERNESS AREA BOUNDARY
WILDERNESS STUDY AREA BOUNDARY
(DELAMAR 3 NW)
3058 III NW
T 8S
T 9S
4118
4117
4116
4114
4113
10'
E
6


DESE
NATIONAL
WILD


R T
D L I F E R A N G E
WILDERNESS AREA BOUNDARY
Pahranagat
Evergreen
Wash
17
16
15
20
21
22
29
28
27
32
33
34
(LOWER PAHRANAGAT LAKE SE)
2958 II SE
2'30"
SCALE 1 24 000
1 MILE
1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL
NEVADA
QUADRANGLE LOCATION
ROAD CL
Primary highway, hard surface
Secondary highway, hard surface
Interstate Route
LOWER PAHR
N370
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
EOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D C 20242
ESCRIPTIVE TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
Ertec
The Earth Technology Corporation
AMS 29



LOWER PAHRANAGAT LAKE, NEV.

N3707.5—W11500/7.5

1969

AMS 2958 II NE-SERIES V898

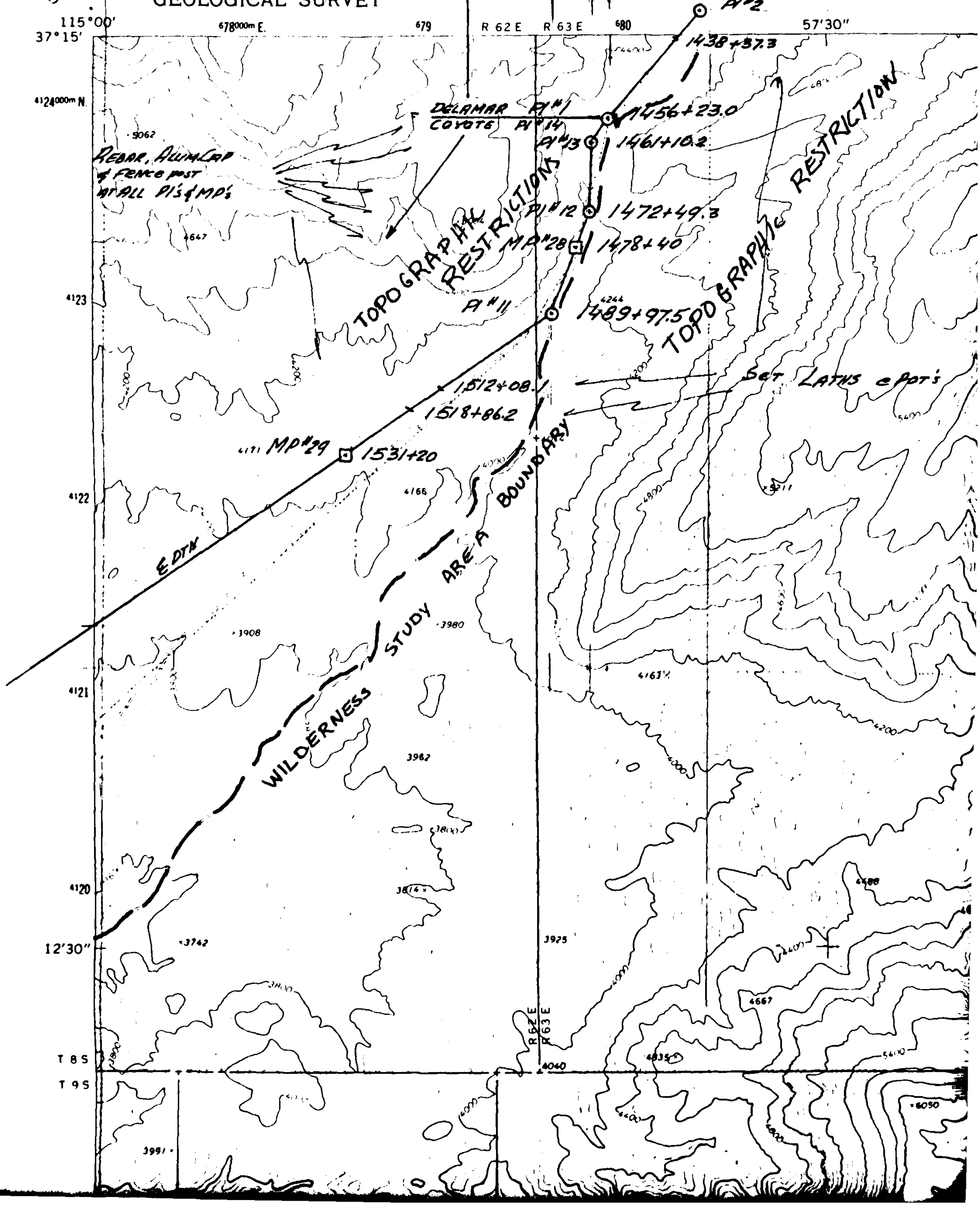
Ertec
Earth Technology Corporation

9

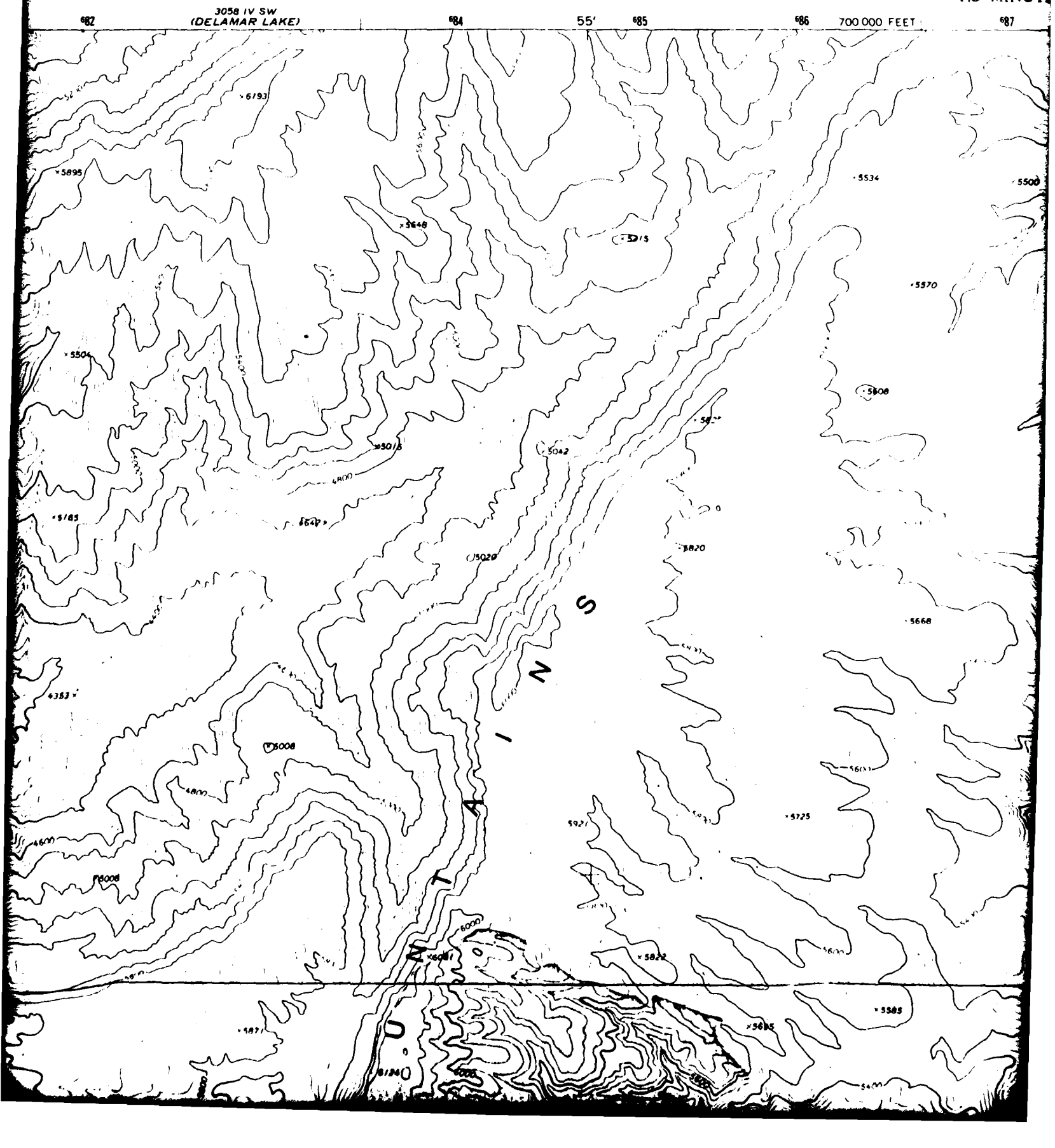
1

2958 I SE
(ALAMO SE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

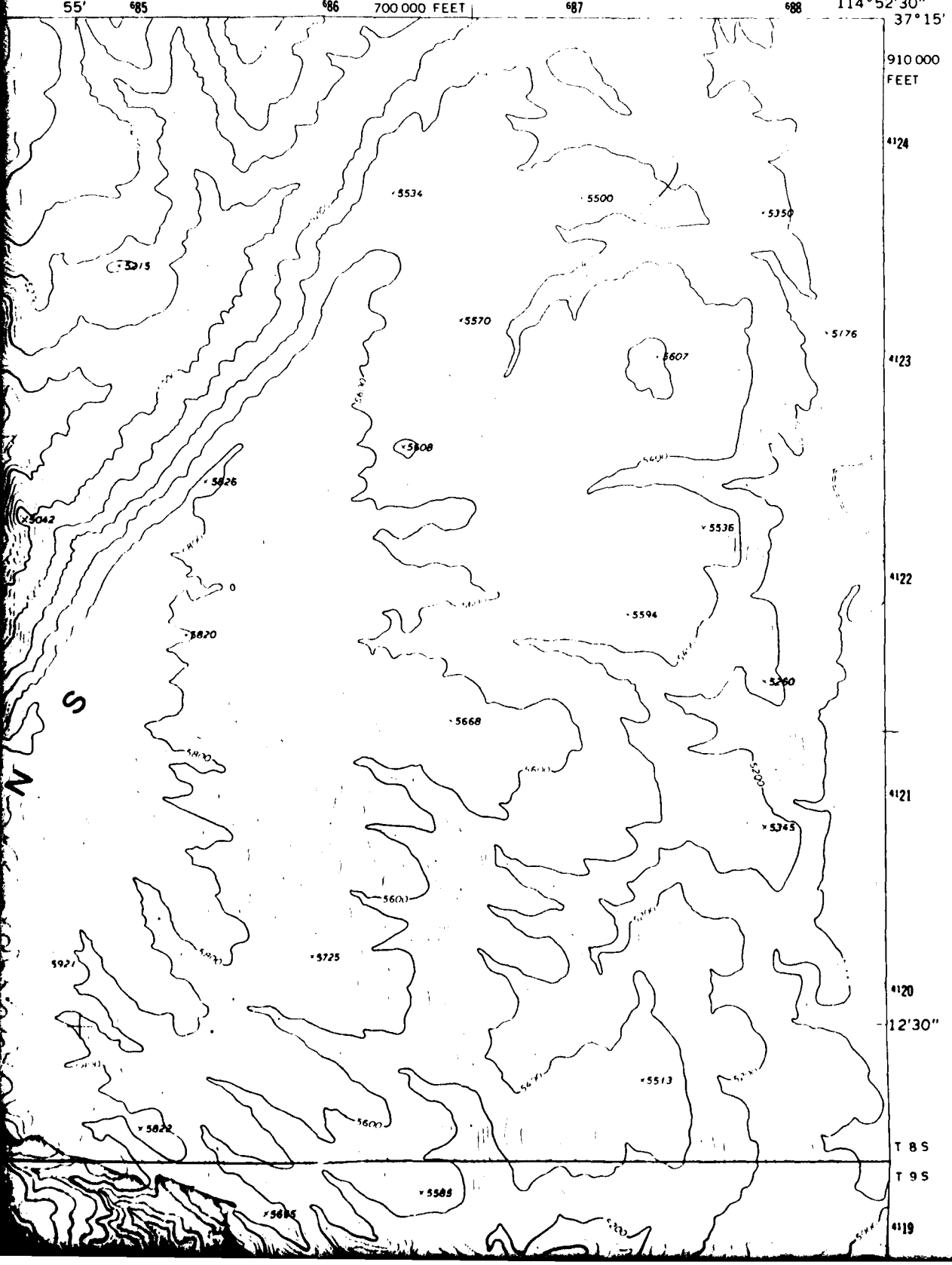


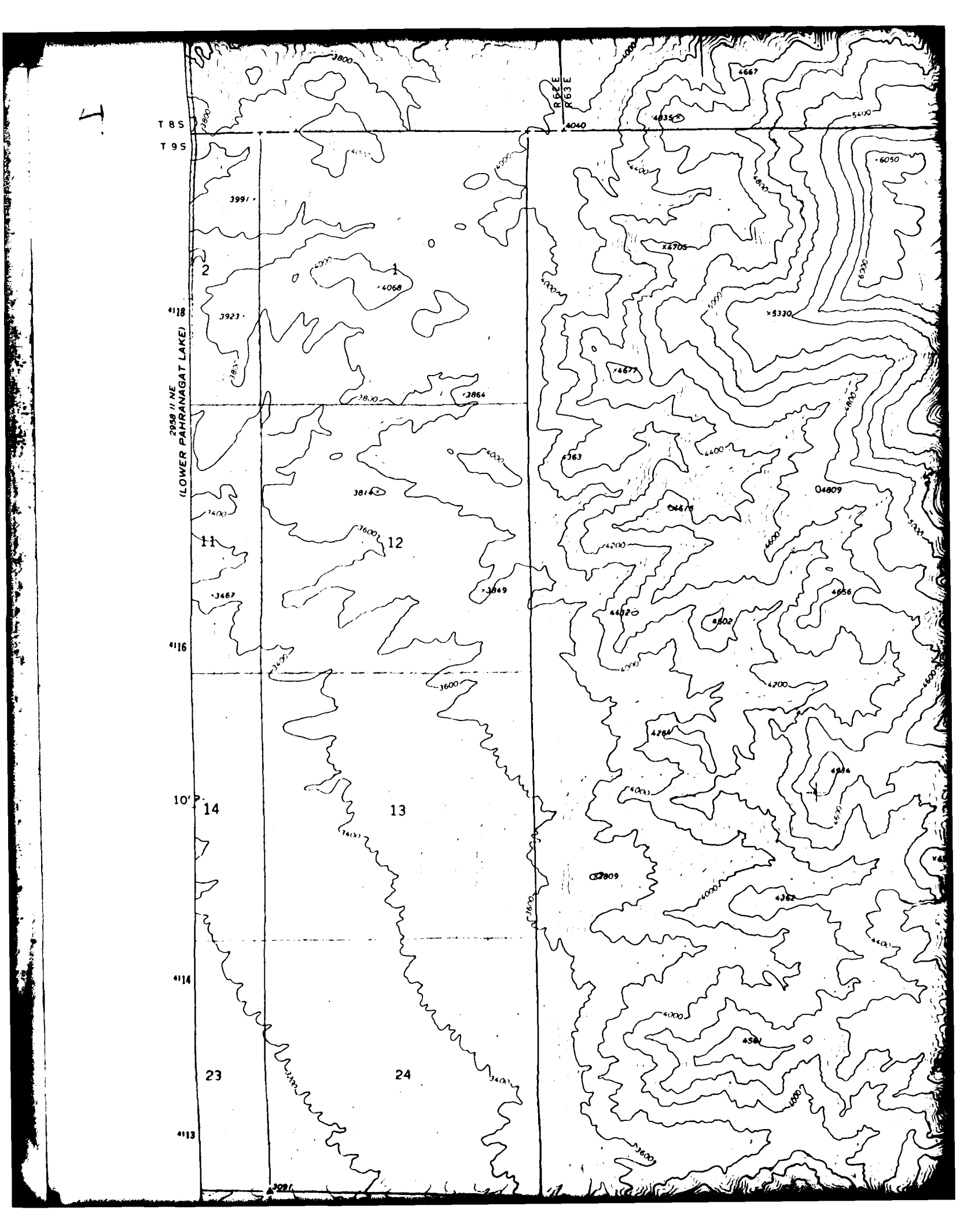
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B

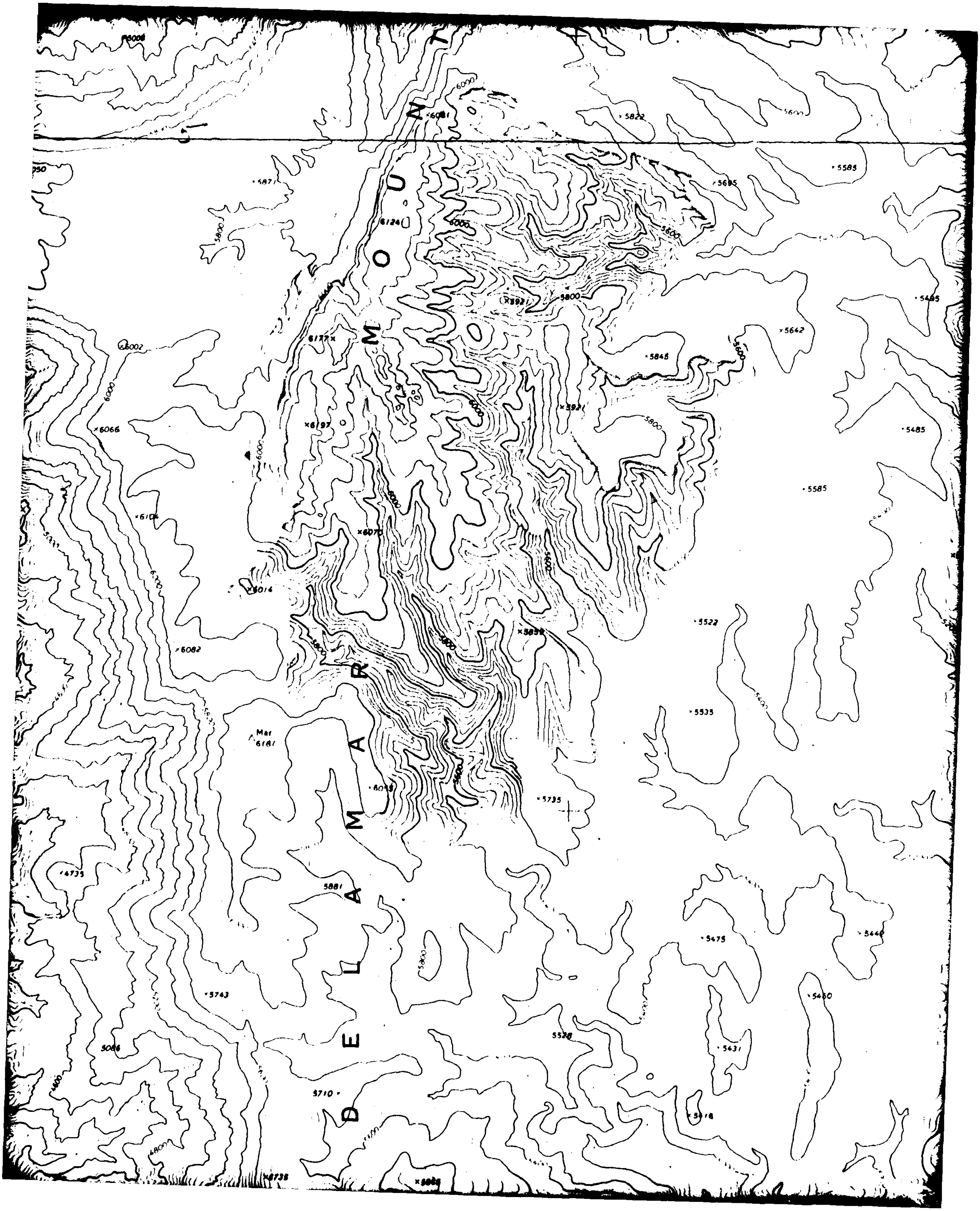


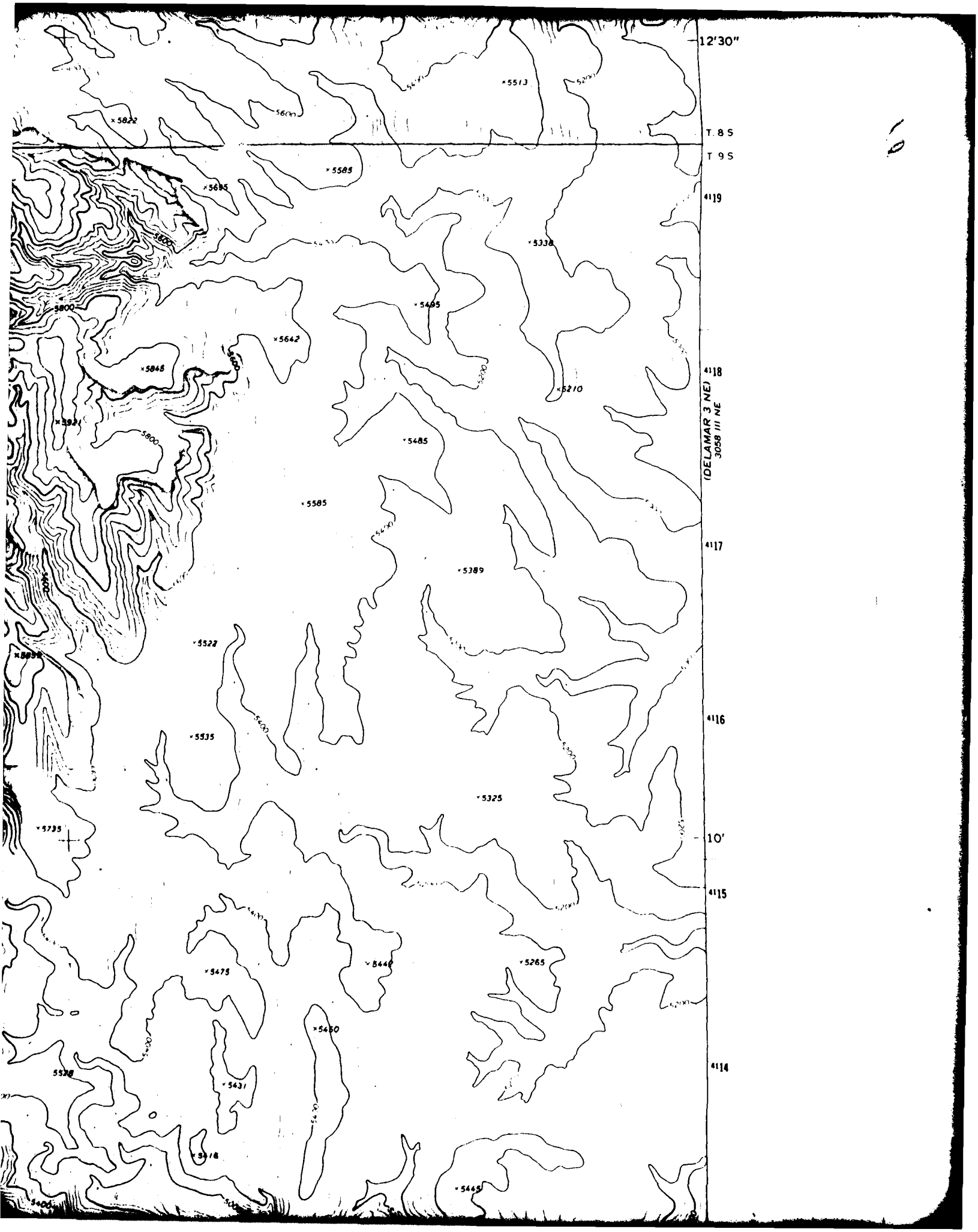
3058 (V SP 3)
(GREGERSON BASIN)

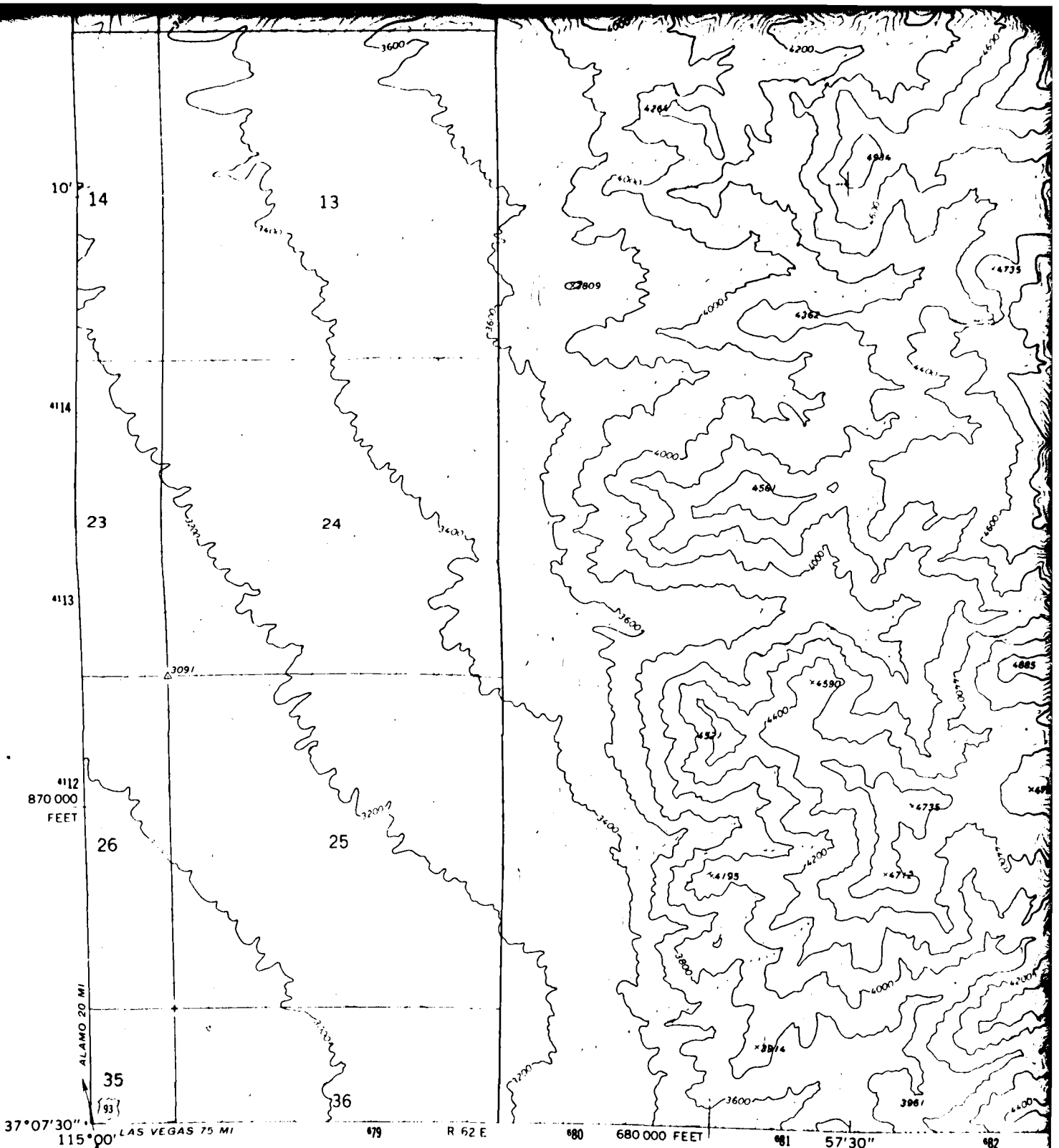
DELAMAR 3 NW QUADRANGLE
NEVADA—LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)




T 8 S
T 9 S
R 62 E
R 63 E
2958 II NE
(LOWER PAHRANAGAT LAKE)
4118
4116
4114
4113
1
2
11
12
13
14
23
24
4040
4035
4667
5400
6050
4705
5330
4677
4068
3991
3923
3864
3814
3649
3467
4809
4656
4362
4584
4581


DELAMAR MOUNT
6081
5822
5585
5695
6124
6000
5800
5921
5485
5642
5848
6002
6066
6197
6177
5585
6104
6070
6014
5522
6082
5859
5535
Mar
6181
5735
4735
5881
5475
5743
5460
5528
5431
5710
5416


12'30"
T. 8 S
T 9 S
4119
4118
4117
4116
10'
4115
4114
(DELAMAR 3 NE)
3058 III NE
×5822
×5513
×5585
×5695
×5338
×5495
×5642
×5848
×5210
×5485
×5585
×5389
×5522
×5535
×5325
×5735
×5475
×5440
×5265
×5450
×5431
×5418
×5465
5600
5800
5400
5200
5000



(LOWER PAHRANAGAT LAKE SE)
2958 II SE

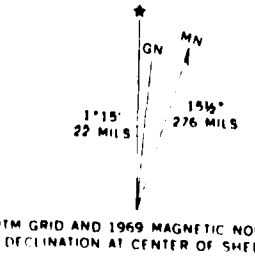
Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

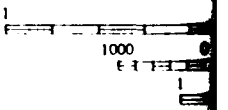
Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue

Where omitted, land lines have not been established

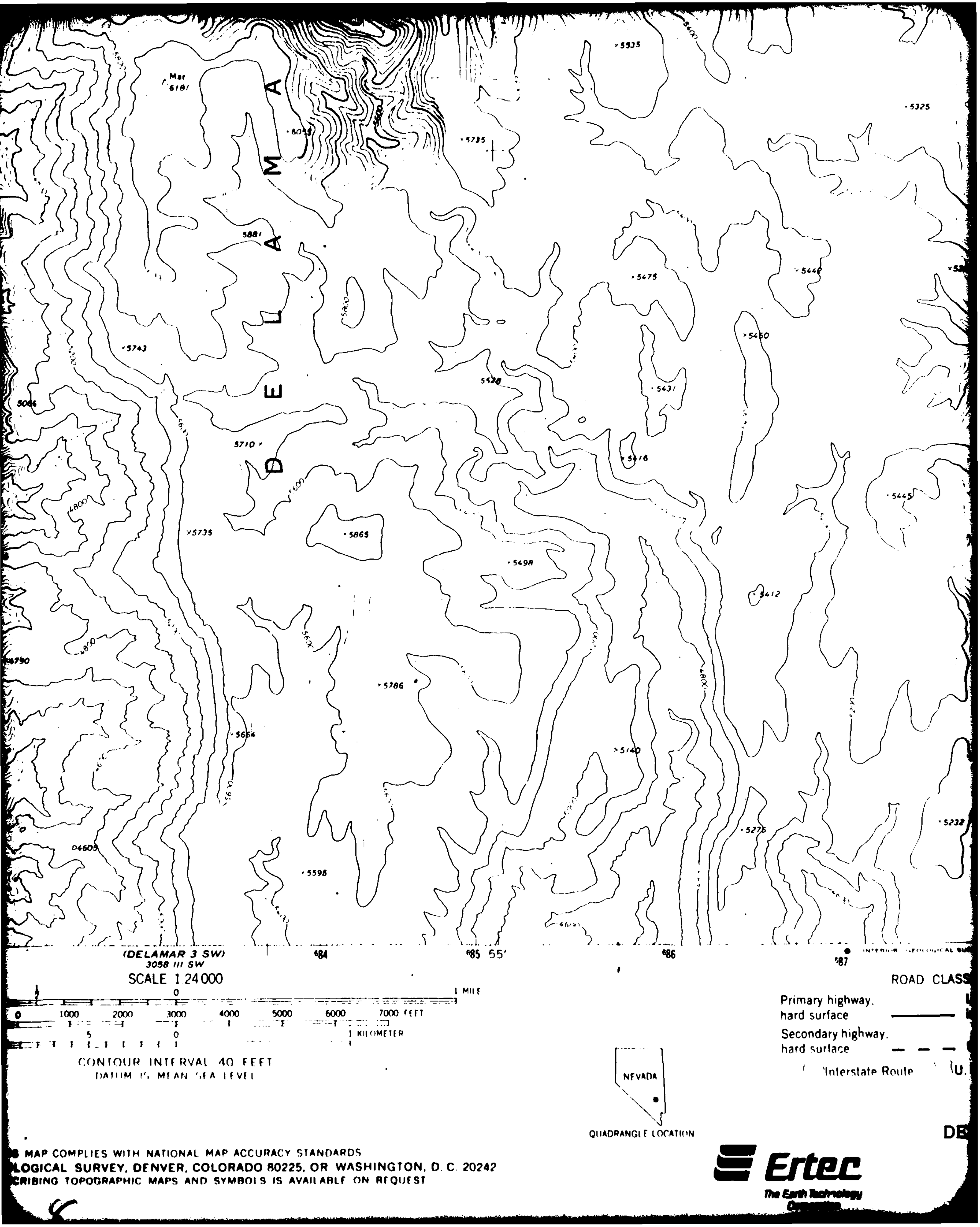


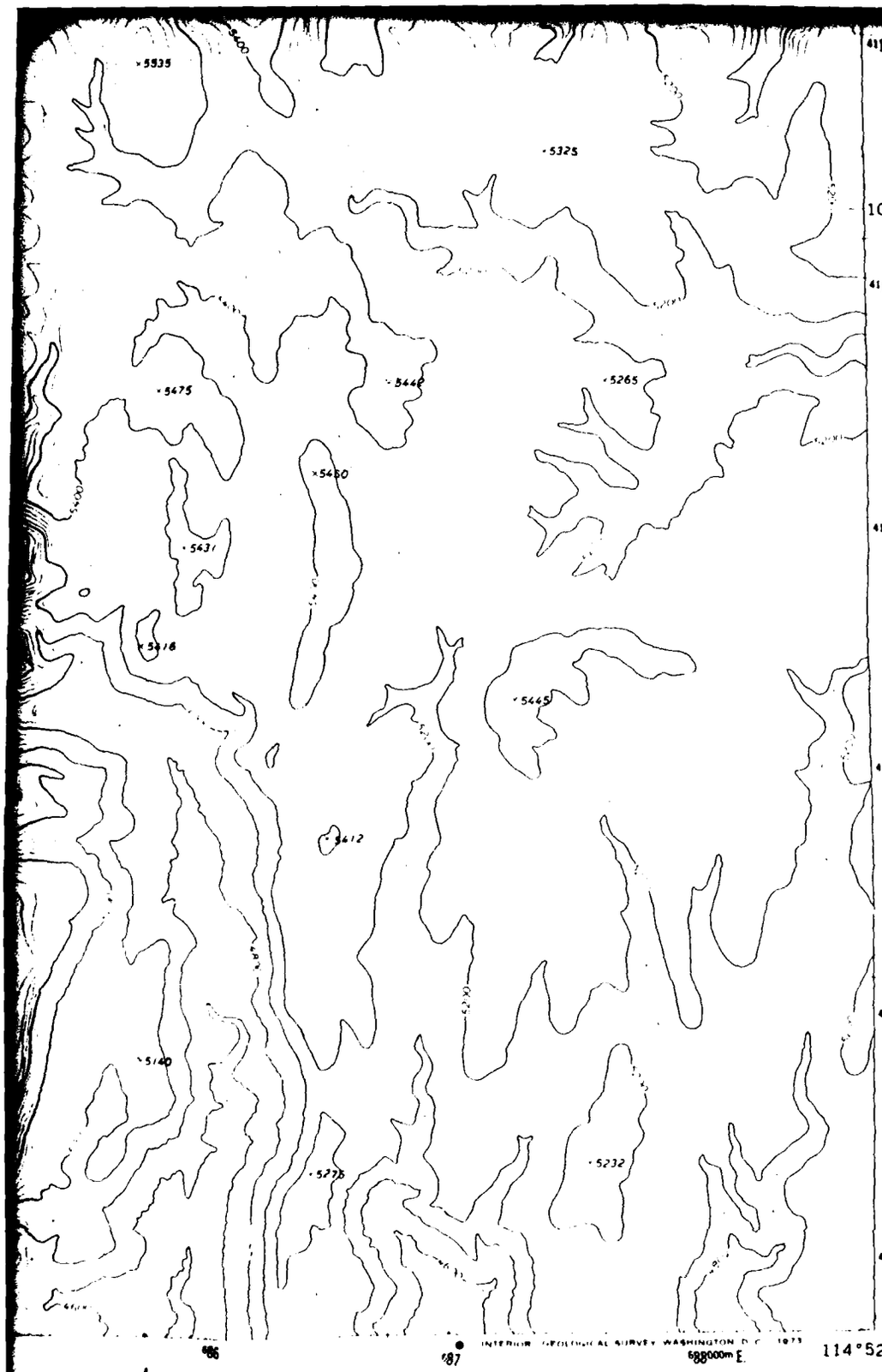
UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



THIS
FOR SALE BY U. S. GEO
A FOLDER DES

7


DELAMAR
5535
5325
Mar 6181
6055
5735
5881
5475
5440
5460
5431
5743
5528
5066
5710
5416
5445
5735
5865
5498
4800
5412
4790
5786
5654
5140
5232
5275
4605
5595
(DELAMAR 3 SW)
3058 III SW
684
685 55'
686
687
SCALE 1:24 000
1 MILE
0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASS
Primary highway, hard surface
Secondary highway, hard surface
Interstate Route
NEVADA
QUADRANGLE LOCATION
S MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
LOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
CRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
Ertec
The Earth Technology Corporation



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U S Route State Route

(DELAMAR 3 SE)
3058 III SE

NEVADA

QUADRANGLE LOCATION

DELAMAR 3 NW, NEV.

N3707.5—W11452.5/7.5

1969

AMS 3058 III NW—SERIES V896

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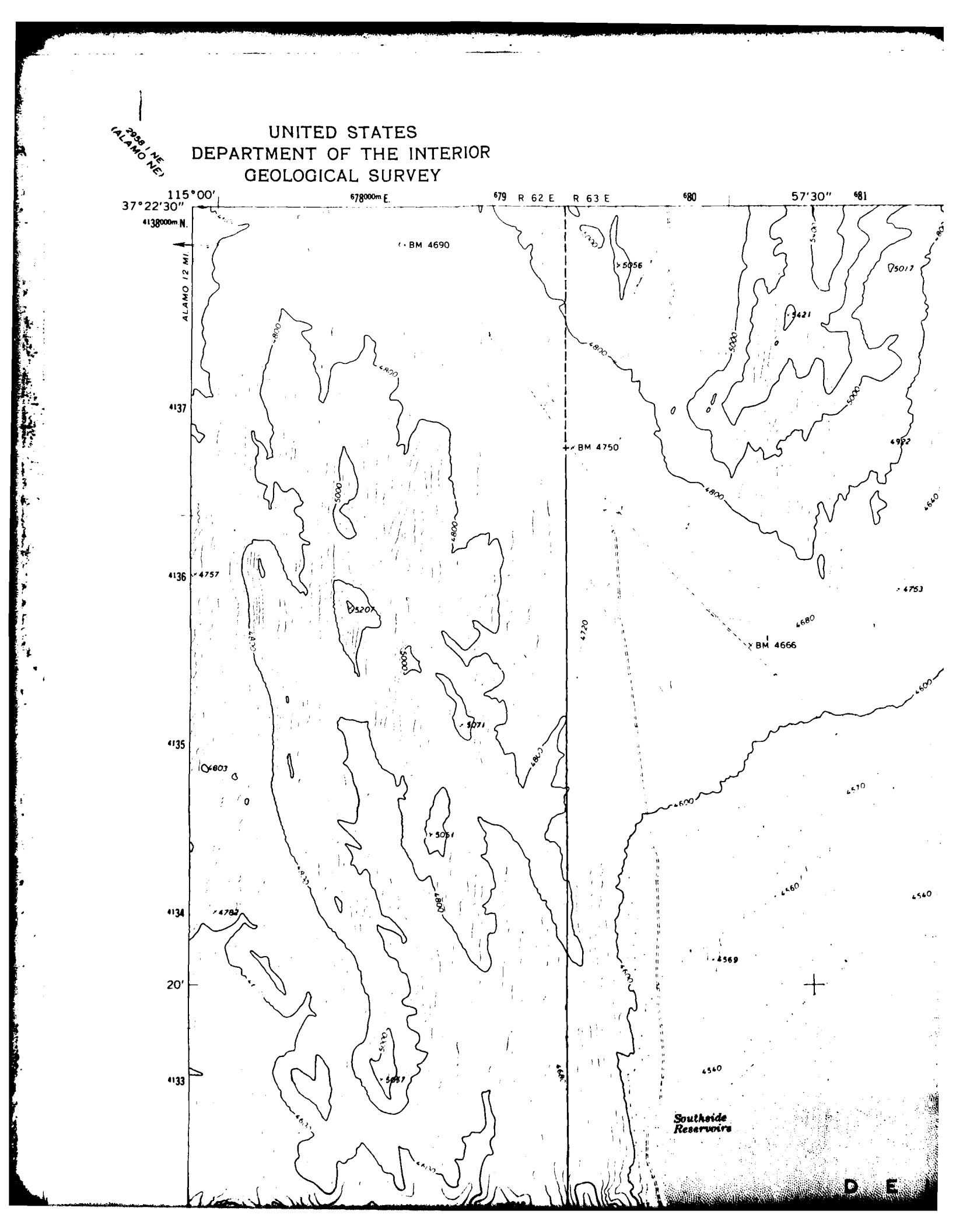
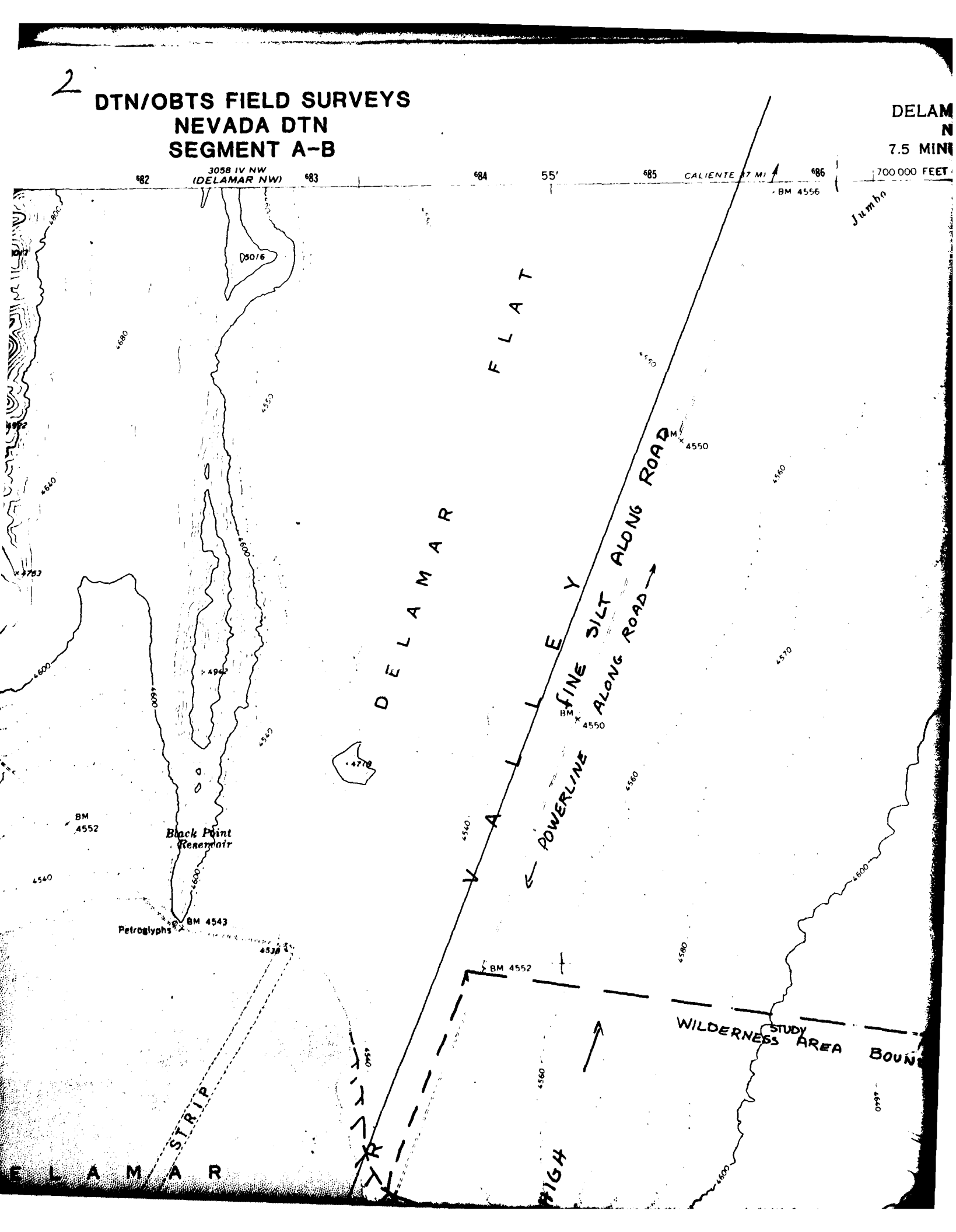
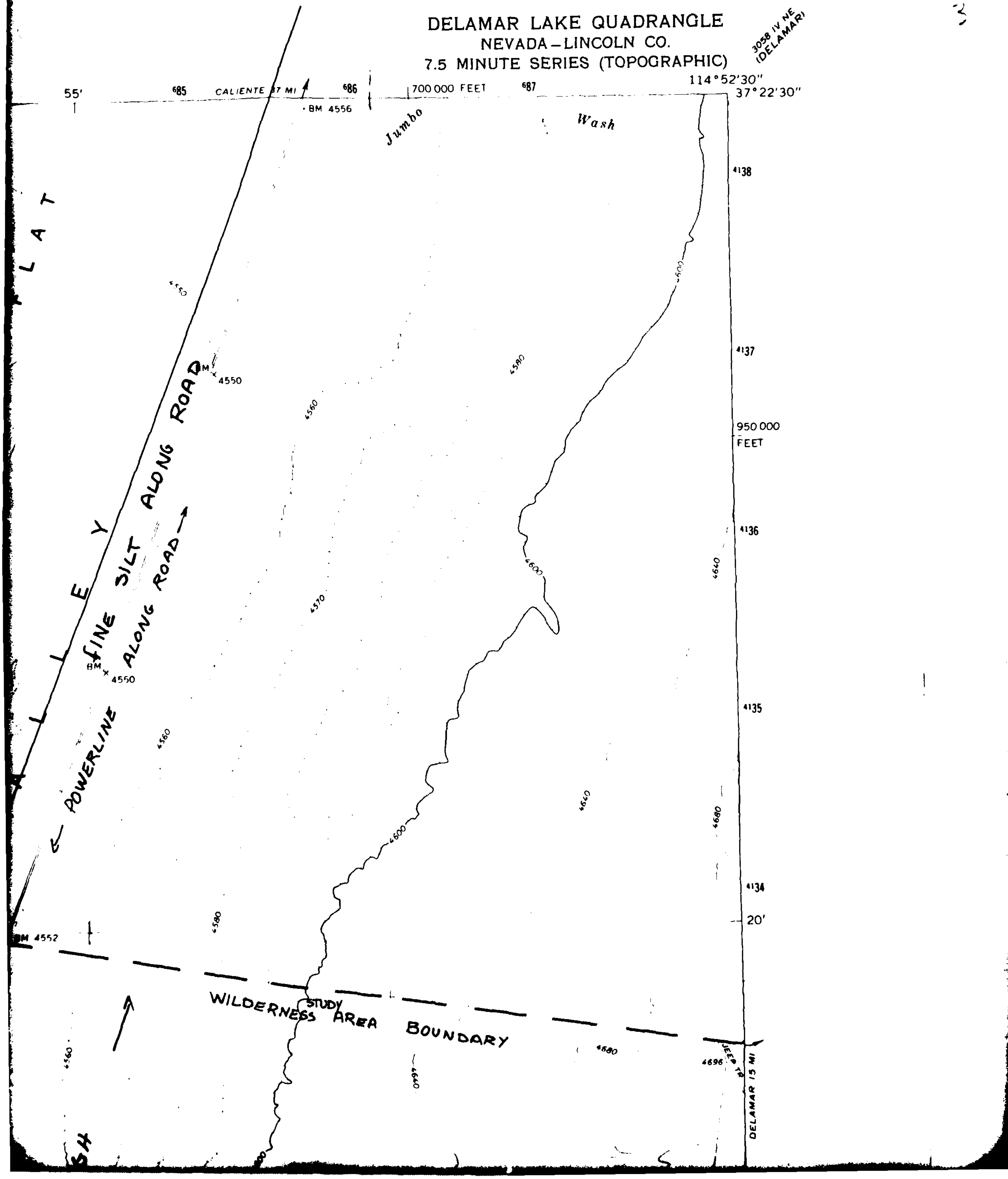
9


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
2958 I NE
(ALAMO NE)
115°00'
37°22'30"
678000m E.
679
R 62 E
R 63 E
680
57'30"
681
4138000m N.
BM 4690
ALAMO 12 MI
5056
5017
5421
4800
5000
4982
4640
BM 4750
4137
4757
4753
5207
4720
4680
BM 4666
4136
4600
5071
4135
4603
4570
5051
4560
4540
4134
4782
4569
20'
4133
5057
4640
Southside
Reservoirs
D E

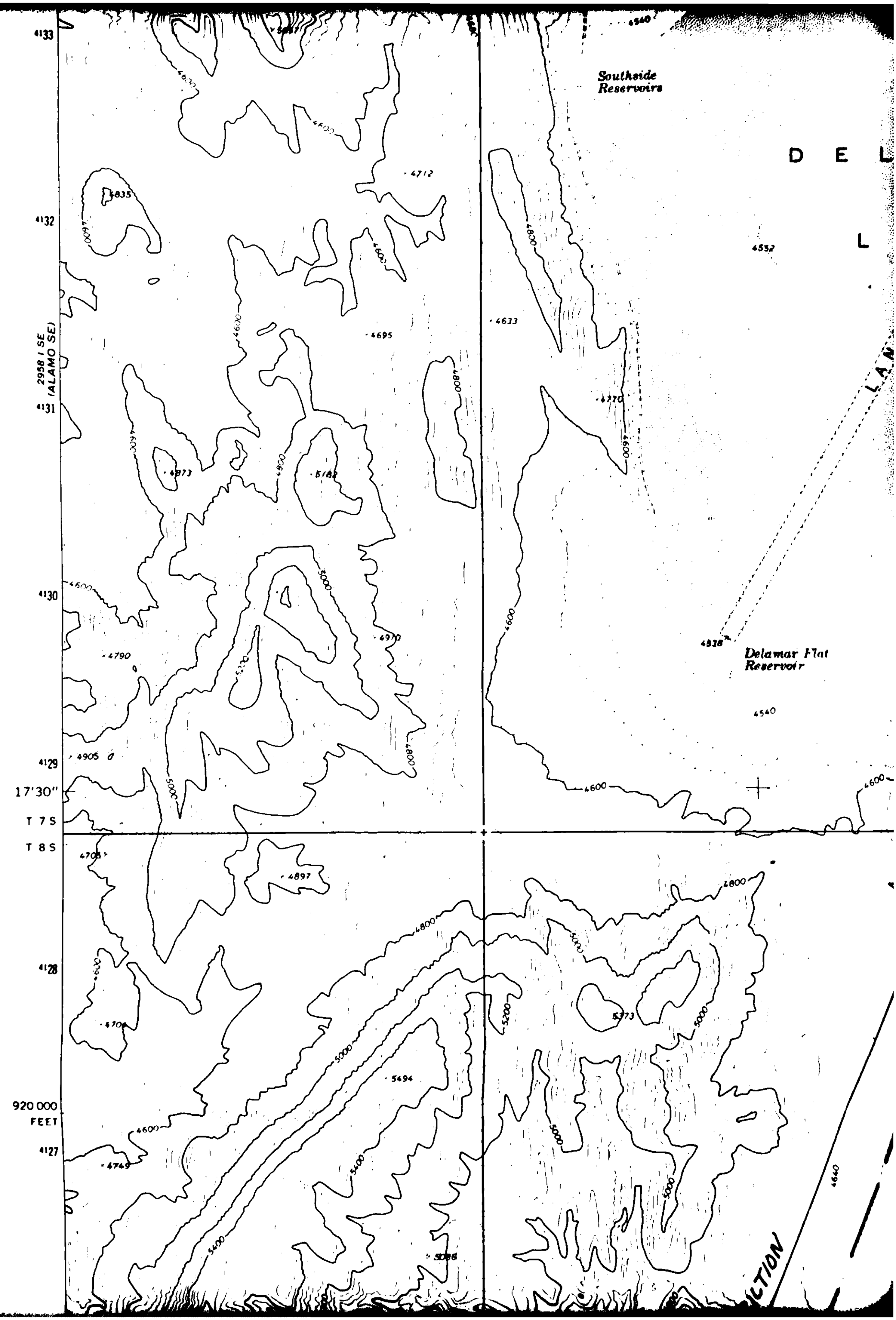
2

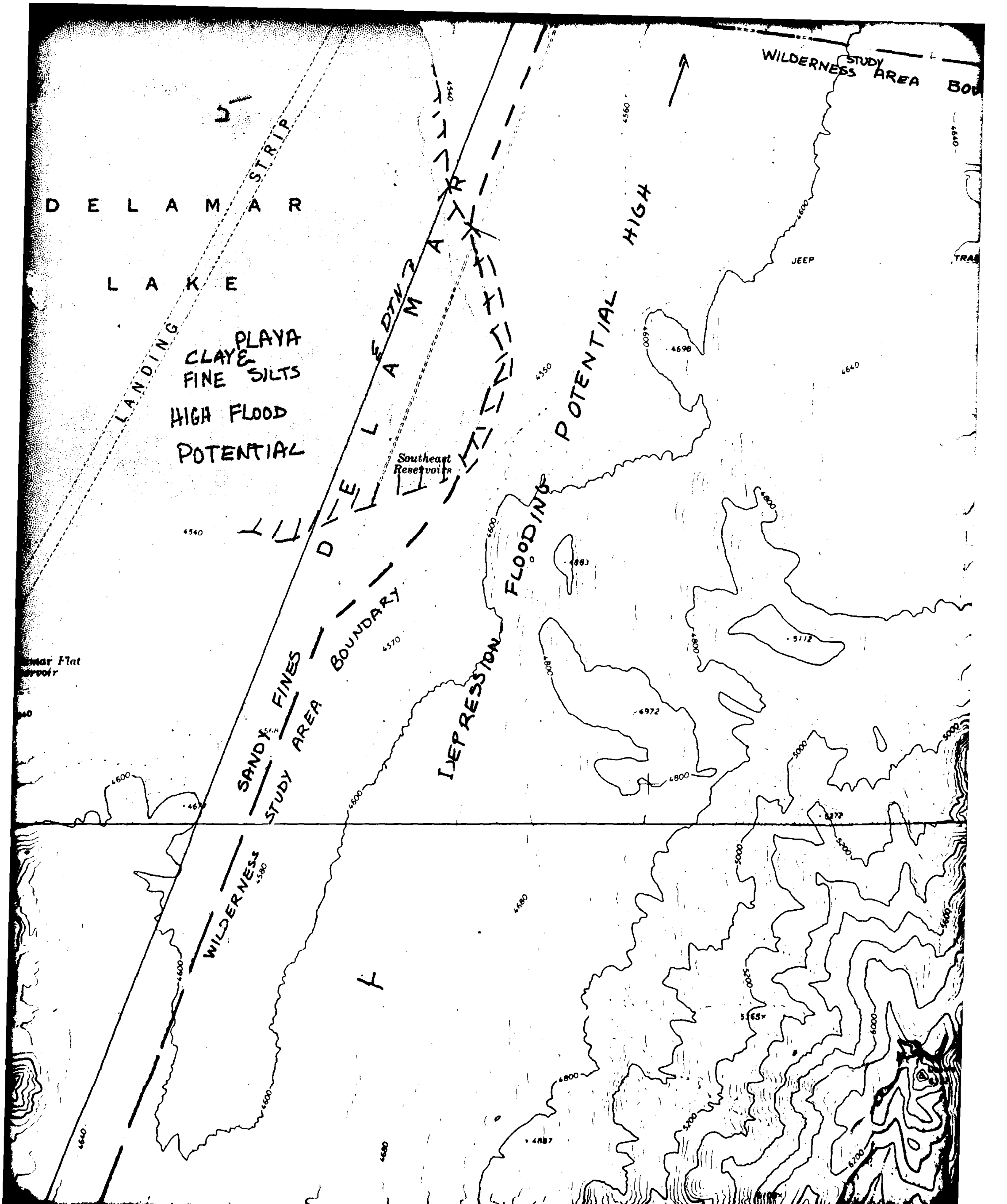
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B



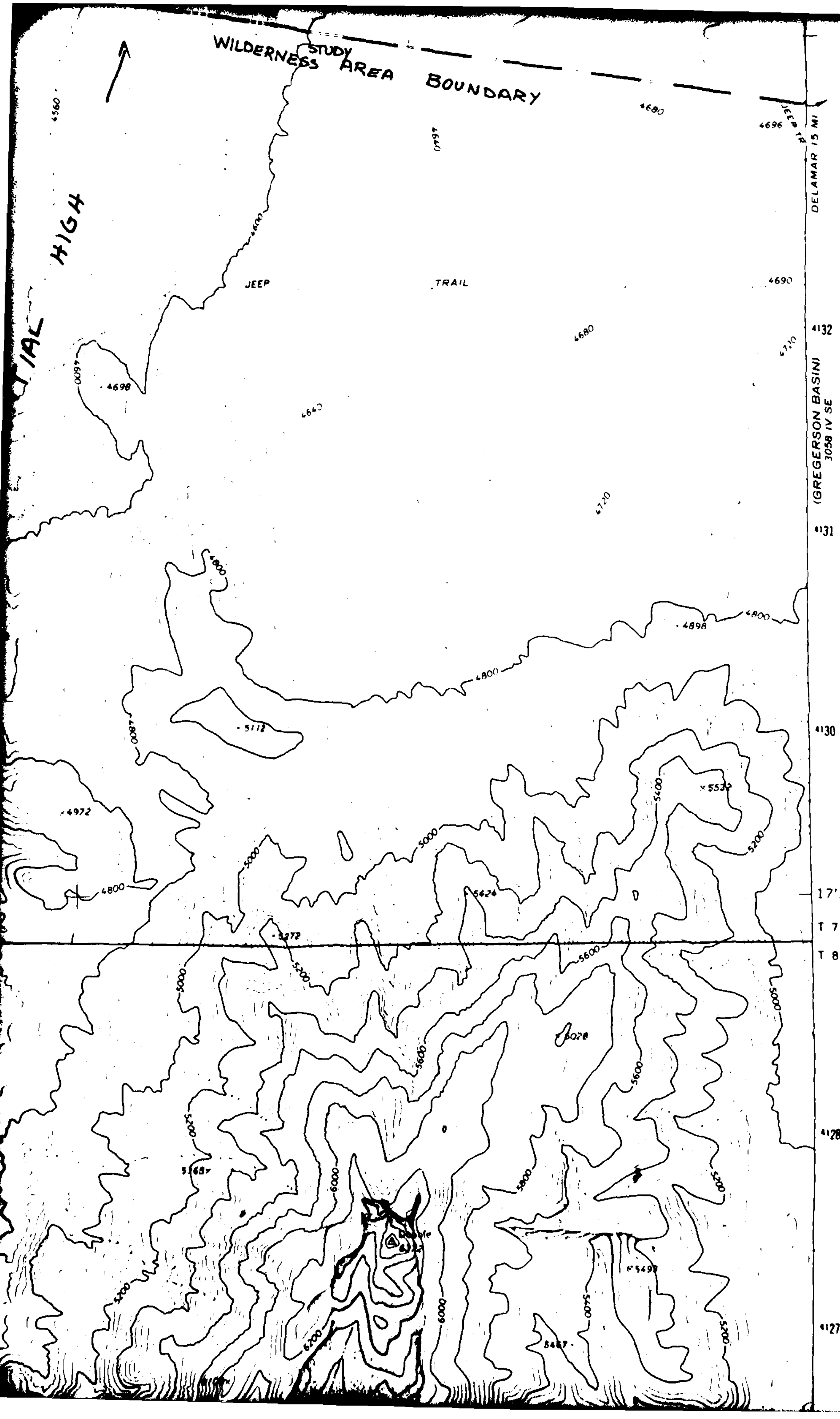

DELAMAR LAKE QUADRANGLE
NEVADA-LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
3058 IV NE
(DELAMAR)
114°52'30"
37°22'30"
55'
685
CALIENTE 37 MI
686
700 000 FEET
687
BM 4556
Jumbo
Wash
4138
4137
950 000
FEET
4136
4135
4134
20'
BM 4550
BM 4550
BM 4552
FINE SILT ALONG ROAD
POWERLINE ALONG ROAD
WILDERNESS STUDY AREA BOUNDARY
JEEP TR
DELAMAR 15 MI
4696
4600
4580
4560
4570
4640
4680

4

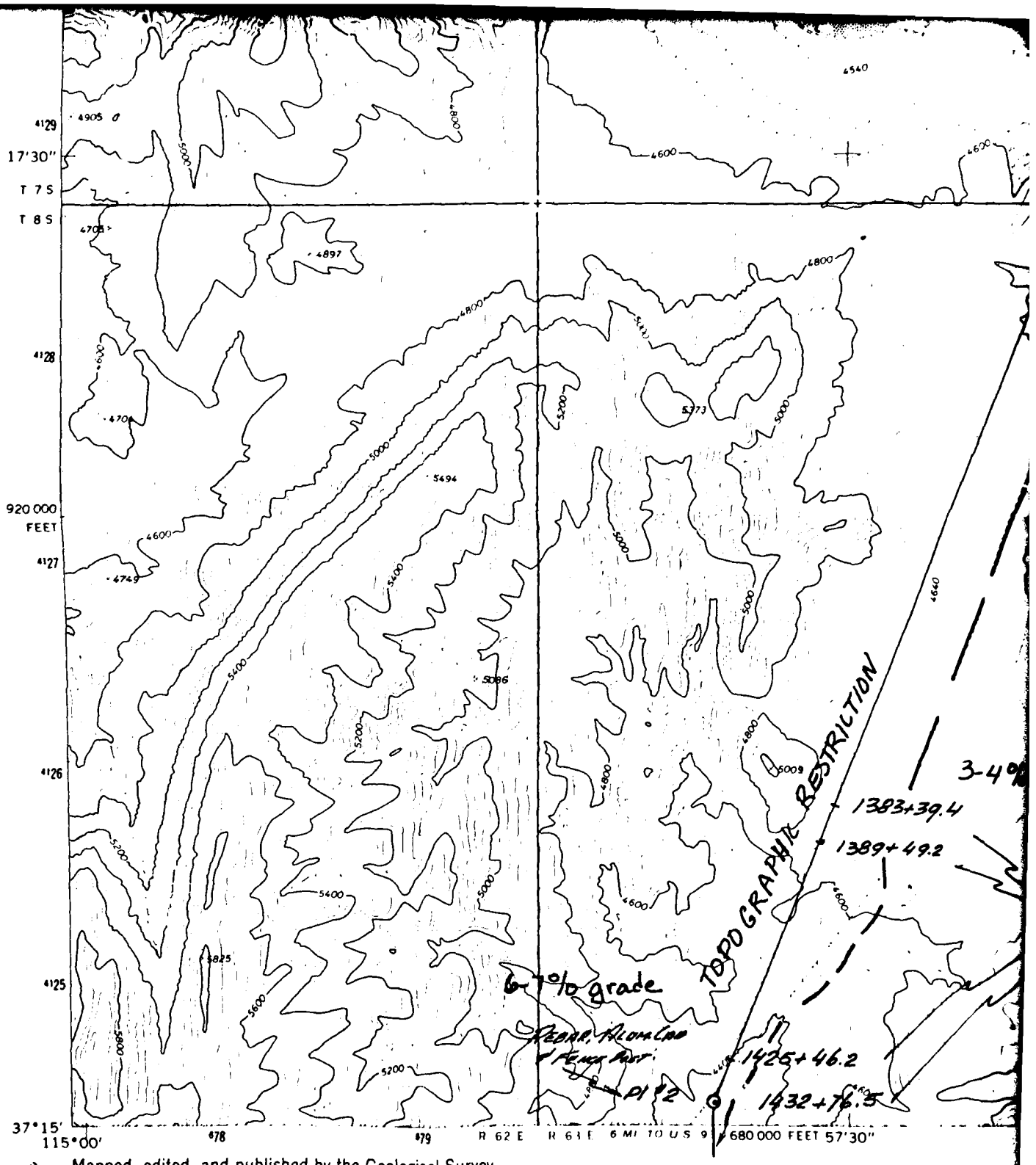

4133
4132
2958 I SE
(ALAMO SE)
4131
4130
4129
17'30"
T 7 S
T 8 S
4128
920 000
FEET
4127
Southside
Reservoirs
D E L
L
LAN
Delamar Flat
Reservoir
CTION
4600
4800
5000
5200
5400
4712
4835
4695
4633
4552
4770
4873
5182
4910
4790
4838
4540
4905
4708
4897
4704
5373
5494
4749
5086
4640



WILDERNESS STUDY AREA BOU
DELAMAR
LAKE
LANDING STRIP
PLAYA
CLAY & FINE SILTS
HIGH FLOOD POTENTIAL
DELAMAR FLAT
DELAMAR DTN
Southeast Reservoirs
SANDY FINES
STUDY AREA BOUNDARY
WILDERNESS
DEPRESSION
FLOODING POTENTIAL HIGH
JEEP
4540
4550
4560
4570
4580
4600
4640
4680
4698
4800
4863
4972
5000
5112
5200
5272
5368
5600
6000
6200
4887



WILDERNESS STUDY AREA BOUNDARY
HIGH
JEEP TRAIL
JEEP TR
DELAMAR 15 MI
(GREGERSON BASIN)
3058 IV SE
4132
4131
4130
17'30"
T 7 S
T 8 S
4128
4127
4680
4696
4690
4698
4720
4800
4898
4972
5112
5000
5200
5400
5532
5624
5600
6028
5800
6000
6200
5493
5467



(LOWER PAHRANAGAT LAKE)
2958 II NE

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue

Fine red dashed lines indicate selected fence lines

Where omitted, land lines have not been established

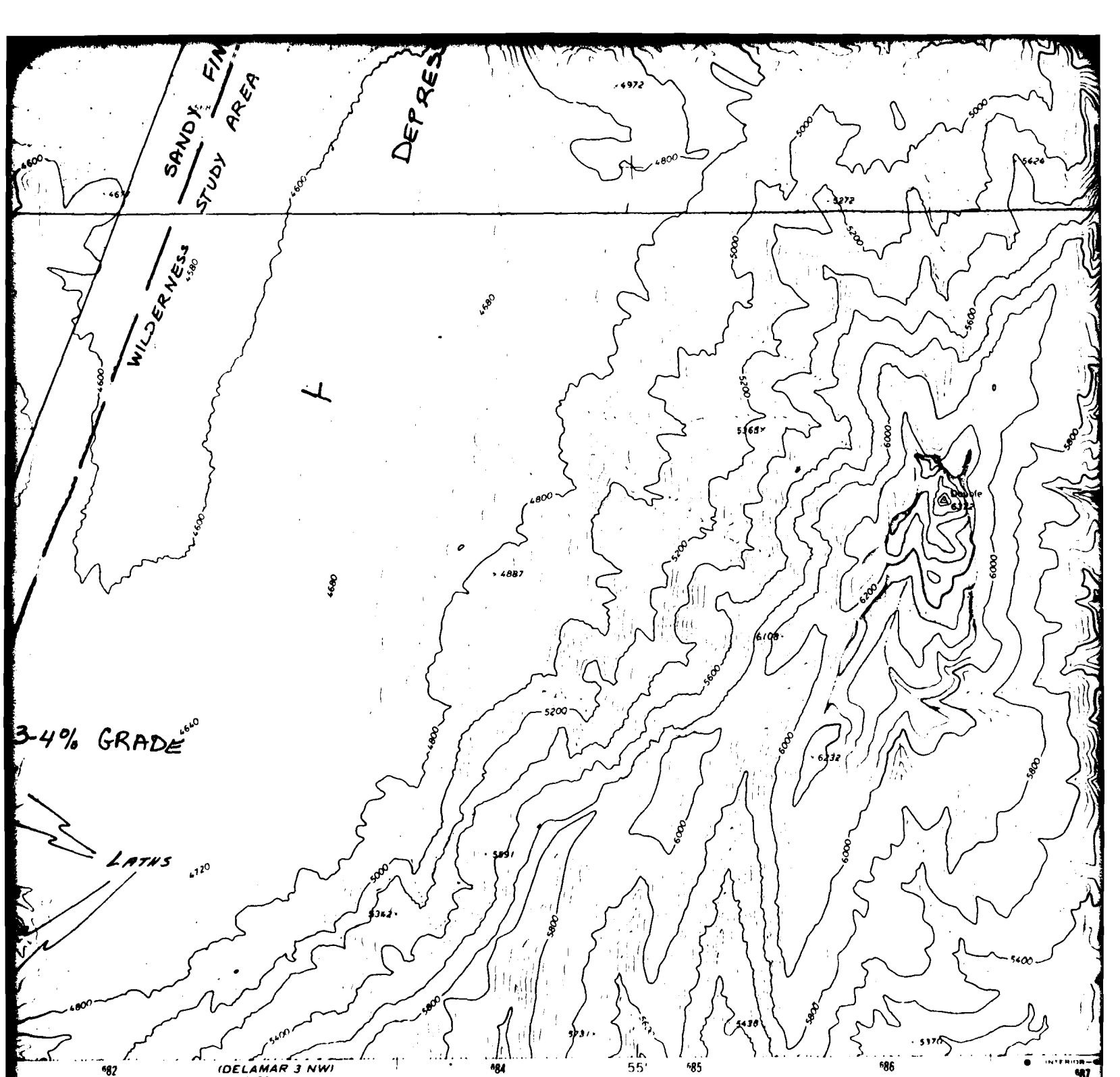
GN MN
1°15' 22 MILS
15½° 276 MILS

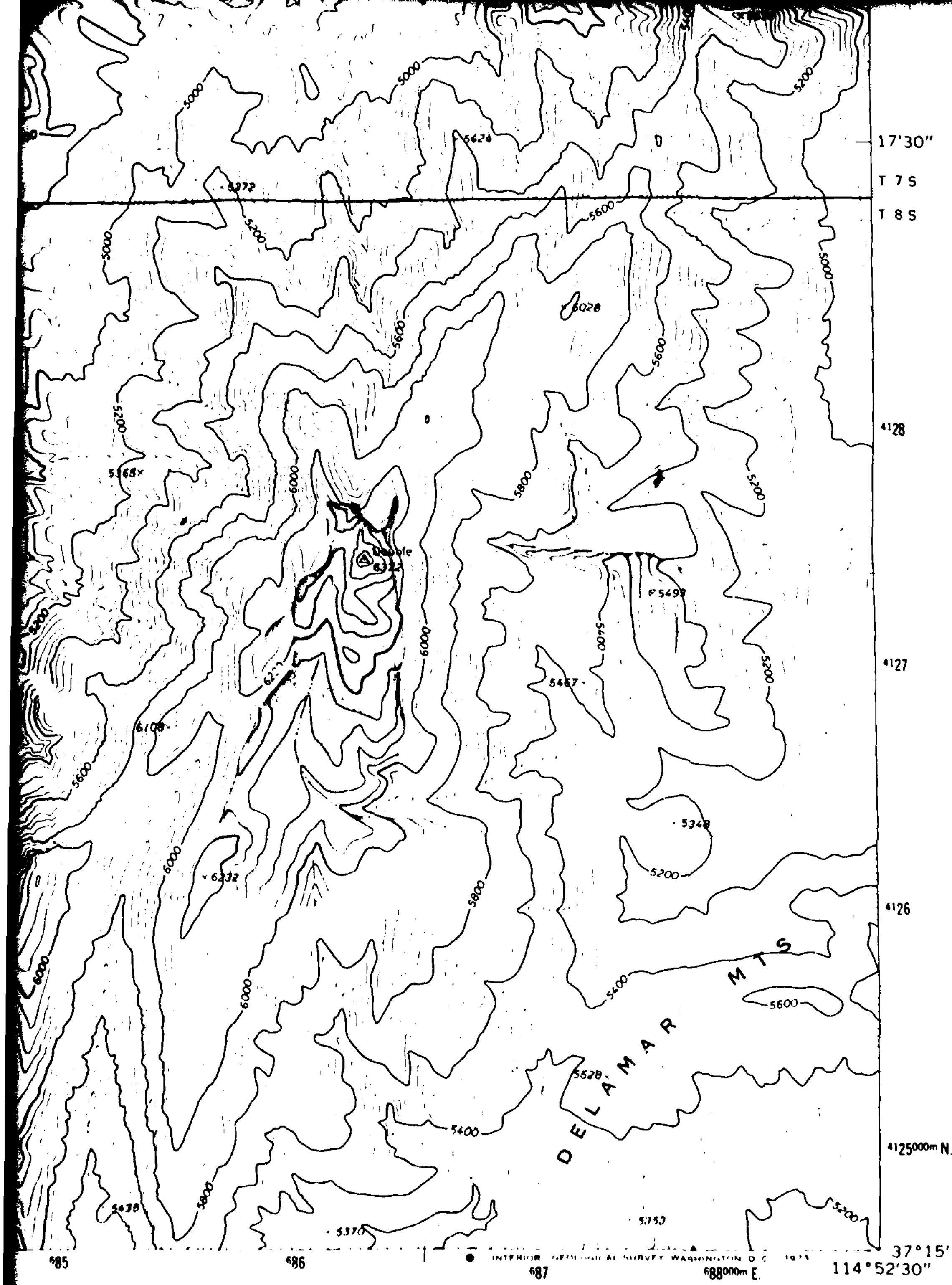
UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000 E

FOR SALE BY U.S.
A FOLDE

2


SANDY FIN
STUDY AREA
WILDERNESS
DEPRES
3-4% GRADE
LATHS
Double
6332
(DELAMAR 3 NW)
3058 III NW
SCALE 1:24000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
NEVADA
QUADRANGLE LOCATION
Primary highway, hard surface
Secondary highway, hard surface
Interstate Rout
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D C 20242
OLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
Ertec
The Earth Technology Corporation



(DELAMAR 3 NE)
3058 III NE

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route   U S Route   State Route

QUADRANGLE LOCATION

Ertec
The Earth Technology Corporation

DELAMAR LAKE, NEV.

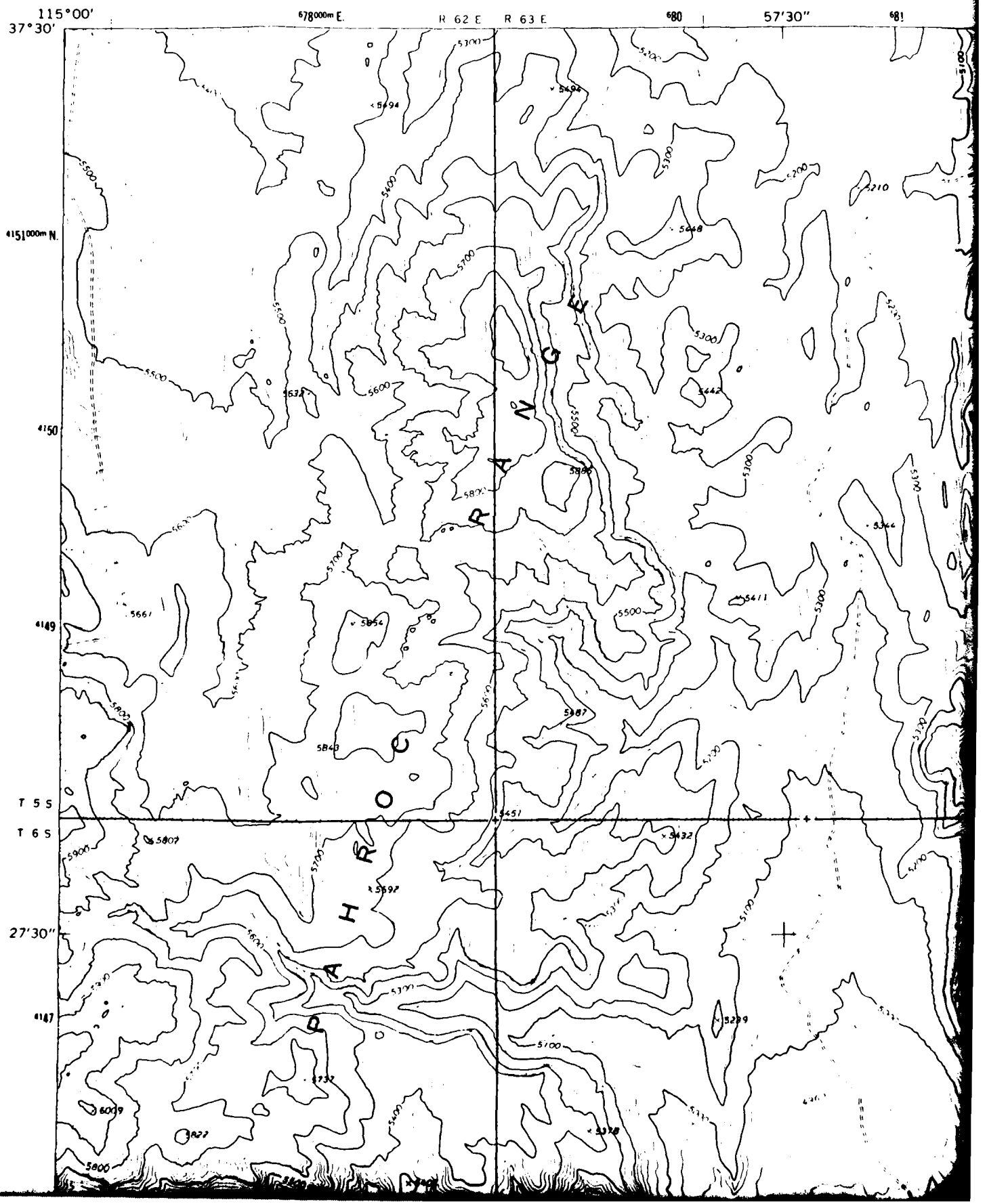
N3715—W11452.5/7.5

1969

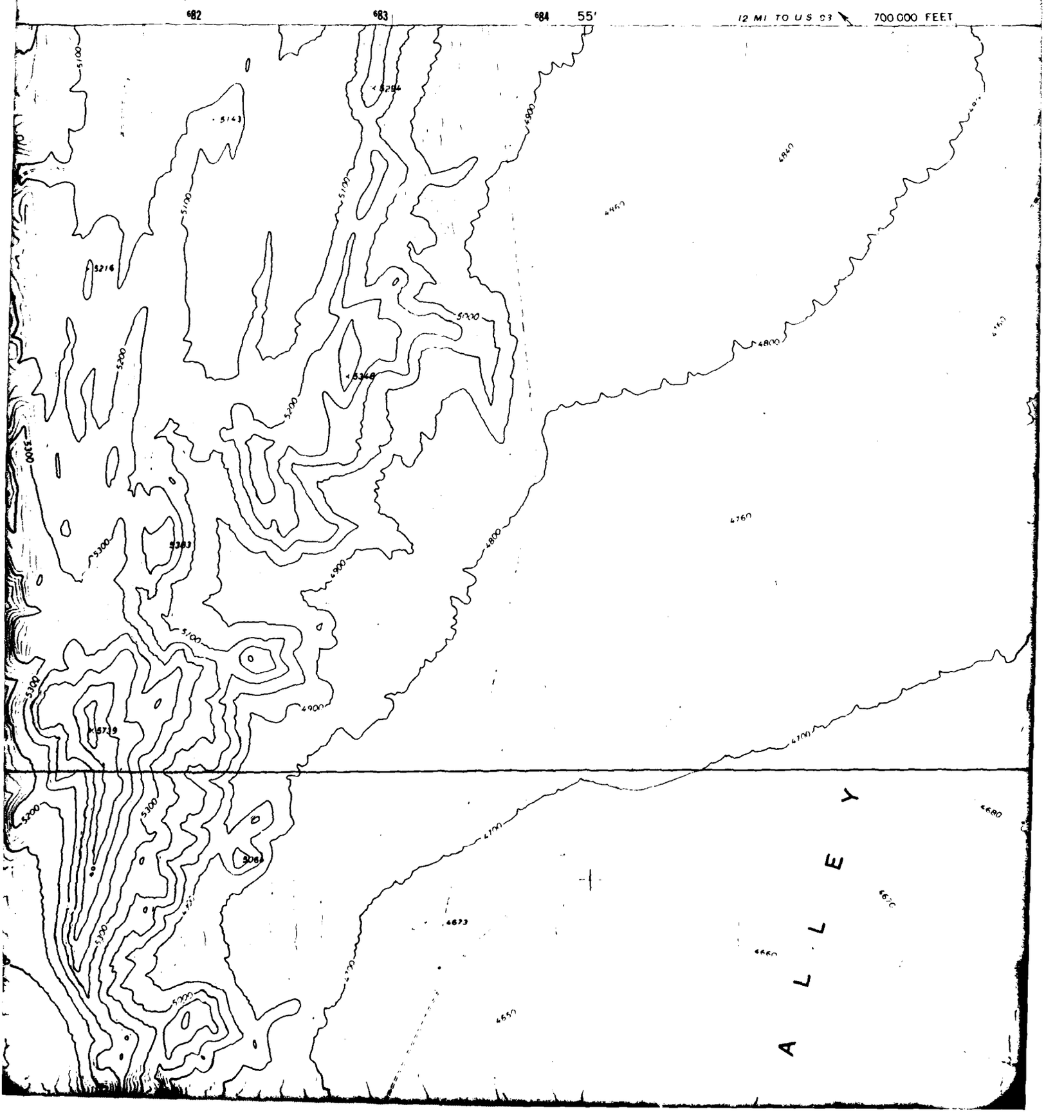
AMS 3058 IV SW - SERIES V896

1

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

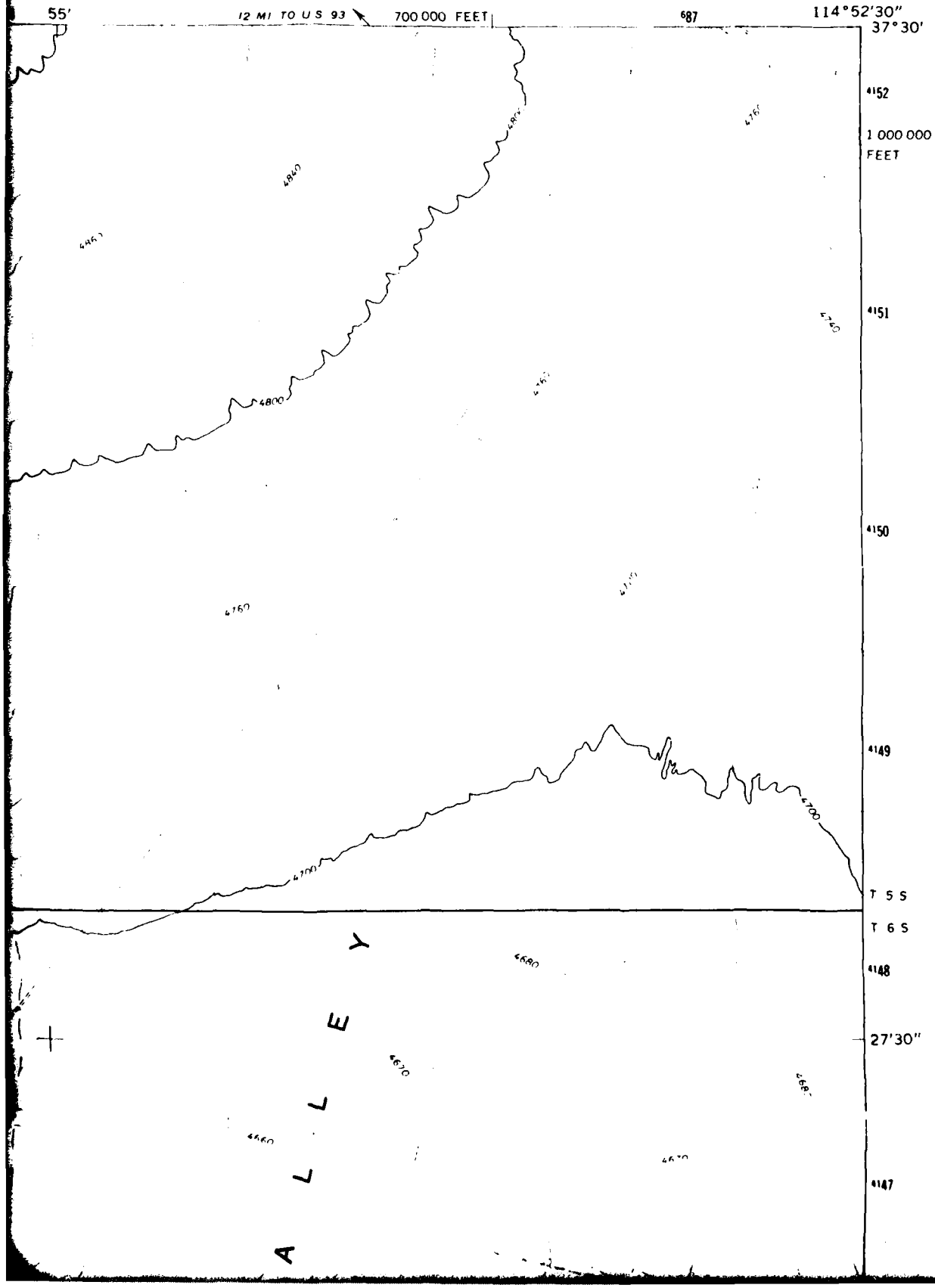


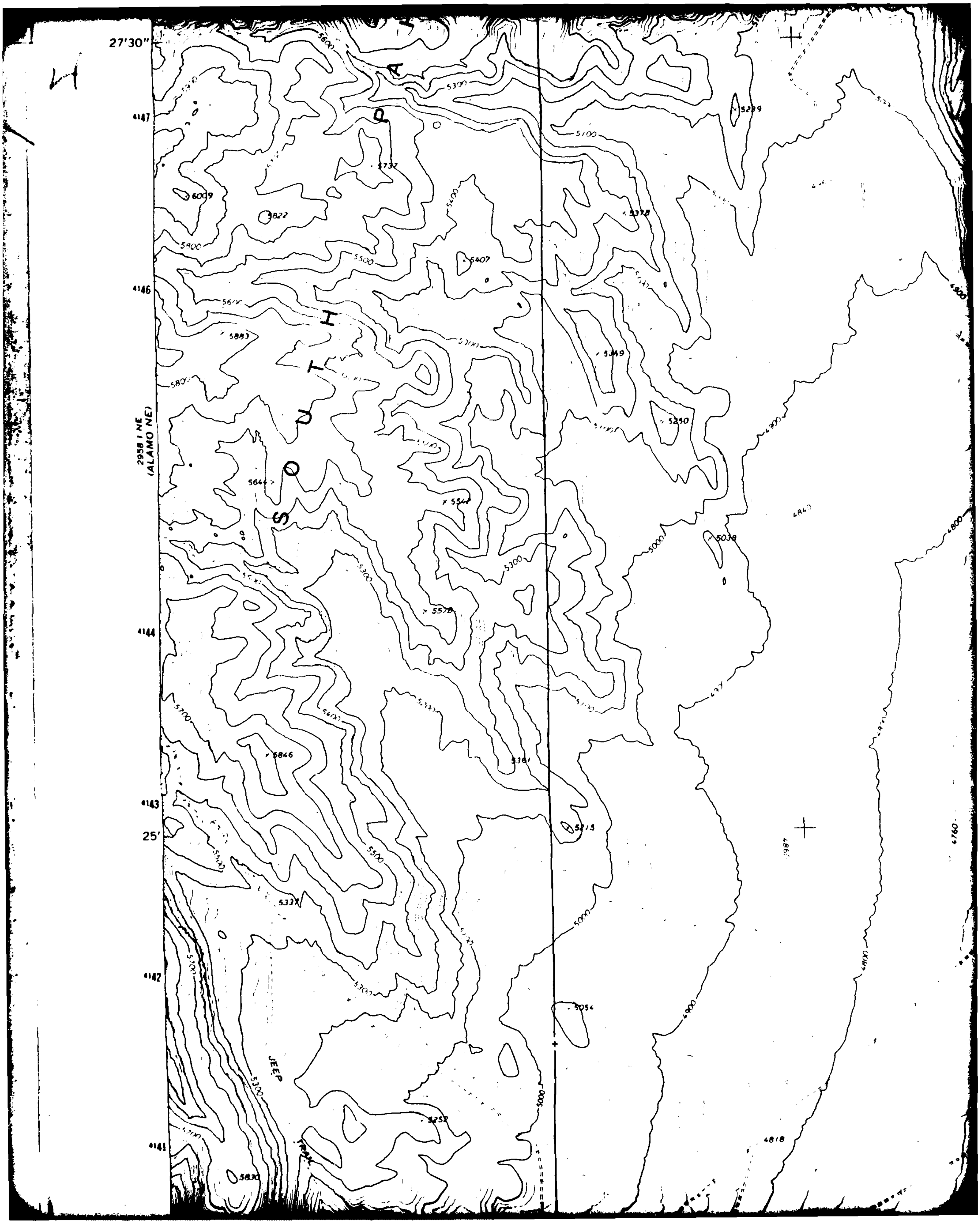
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B



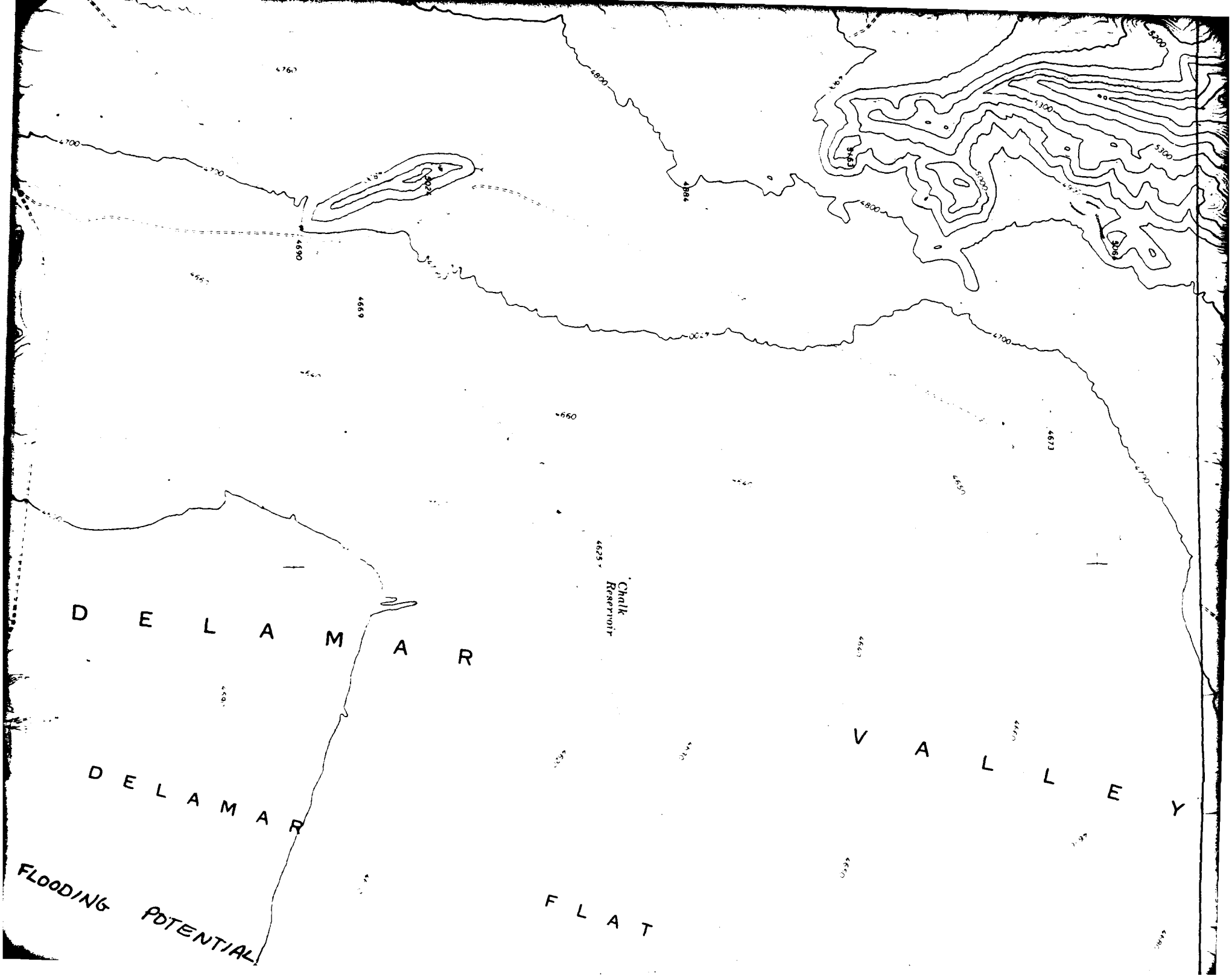
3

DELAMAR NW QUADRANGLE
NEVADA—LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

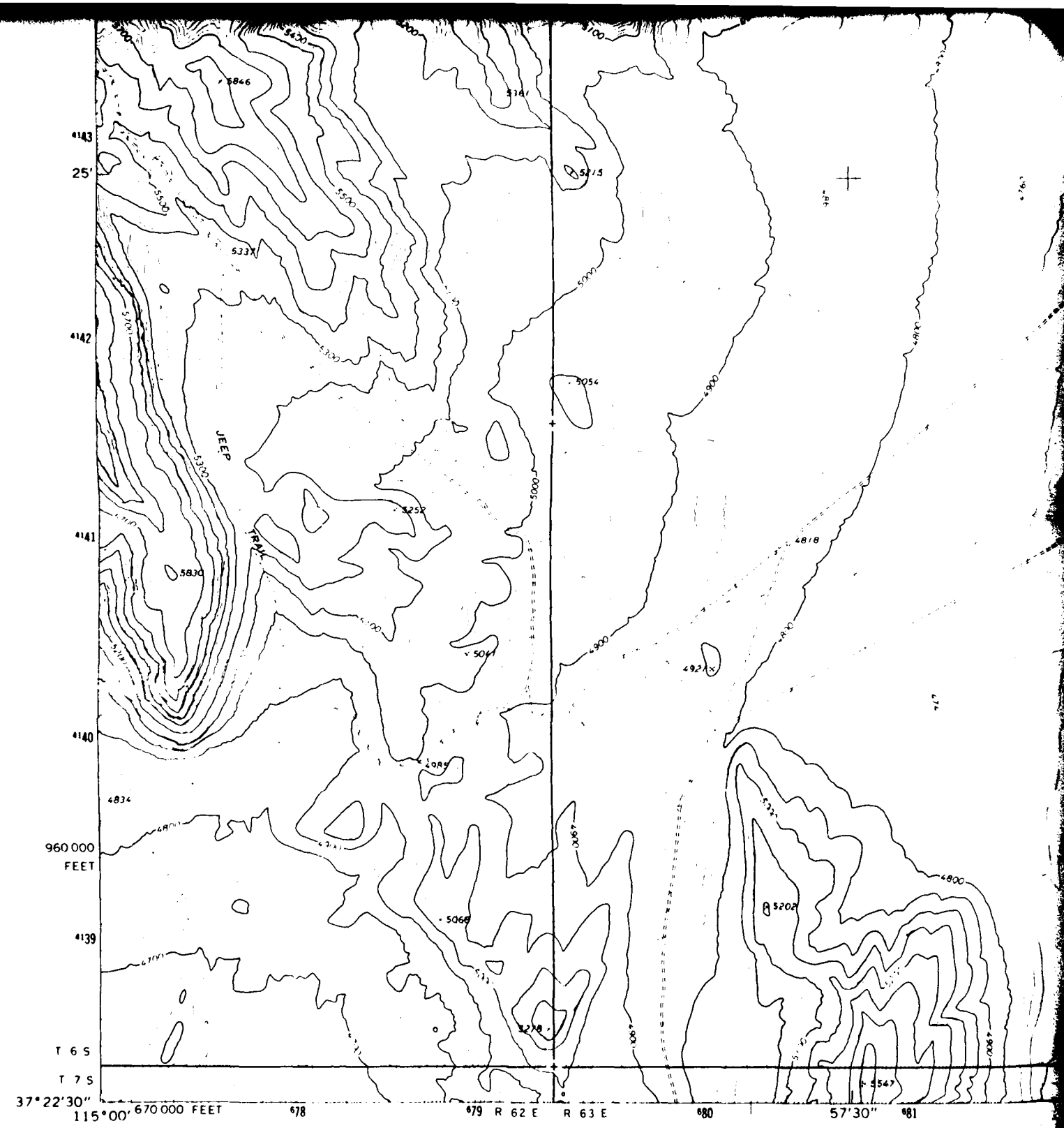




27'30"
4147
4146
4144
4143
25'
4142
4141
2958 I NE
(ALAMO NE)
SOUTH PA
5600
5300
5100
5299
5737
6009
5822
5400
5378
5800
5500
5407
5883
5700
5349
5250
4800
5644
5544
5038
5000
5578
5846
5361
5215
4760
5337
5054
4900
JEEP
TRAIL
5252
4818
5830


DELAMAR
DELAMAR
FLOODING POTENTIAL
Chalk Reservoir
VALLEY
FLAT

DELAMAR VALLEE
DELAMAR FLAT
Cyanide Reservoir
4653
Delamar Wash
Chalk Reservoir
4625
BM 4651
(DELAMAR) 3058 IV NE
CALIENTE 32 MI
27'30"
25'
4148
4147
4146
4145
4142
4605
ROAD
POWERLINE ALONG
& DTN'Z
FLOODING POTENTIAL
HIGH
Wash
Cedar
BM 4585
Powerline Reservoir
4580



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10 000 foot grid based on Nevada coordinate system, east zone
1000 meter Universal Transverse Mercator grid ticks,
zone 11, shown in blue

[illegible] red dashed lines indicate selected fence lines

[illegible] land lines have not been established

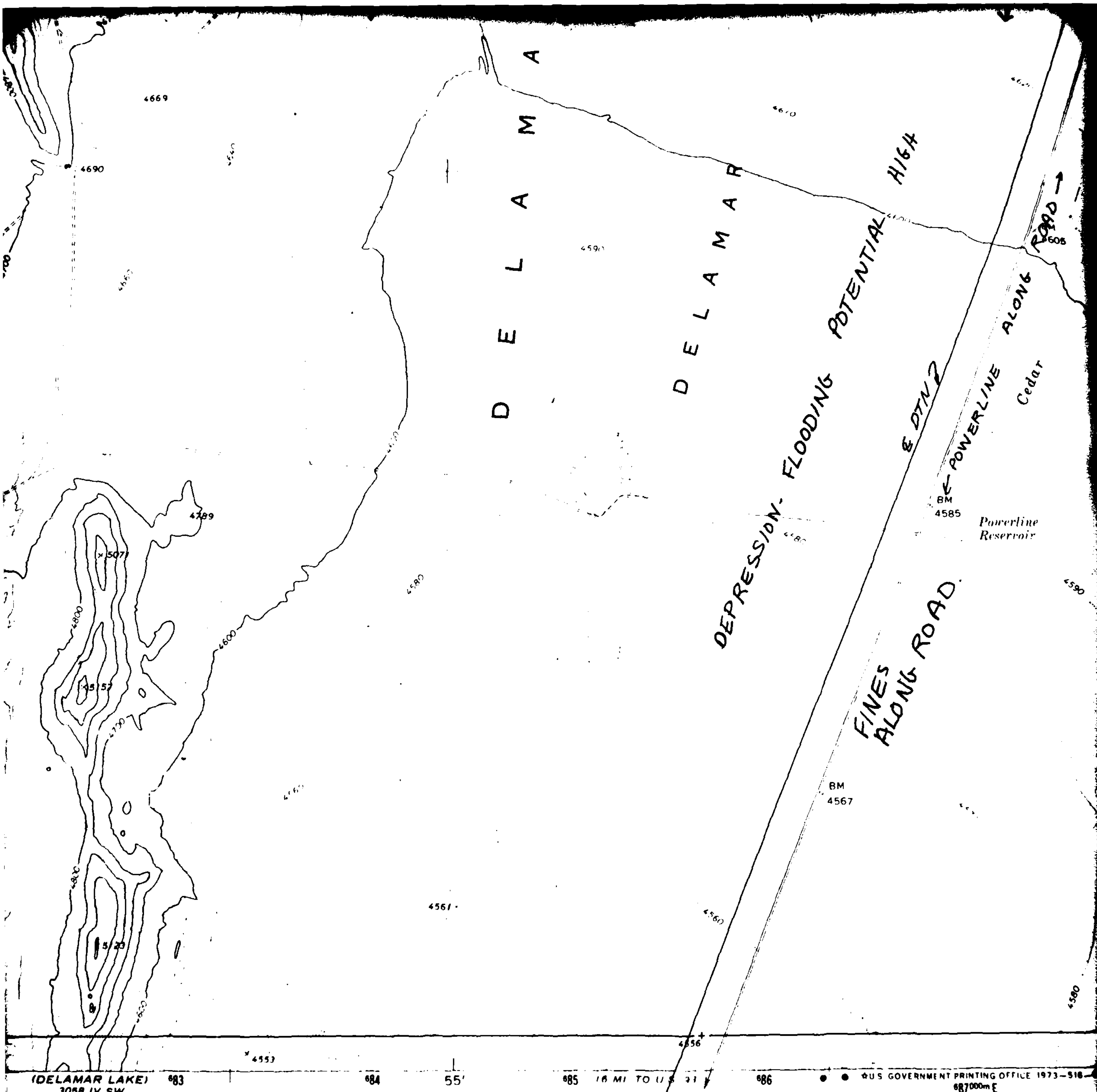
GN MN
1°15'
22 MILS
15½°
276 MILS

UTM GRID AND 1968 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

1000 0

ALAMO SE)
1968 I SE

FOR SALE BY U.S. GEOL
A FOLDER DESC



SCALE 1:24 000

1 MILE

2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

TOUR INTERVAL 20 FEET
ES REPRESENT 10 FOOT CONTOURS
ATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, h improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U S Route

Ertec
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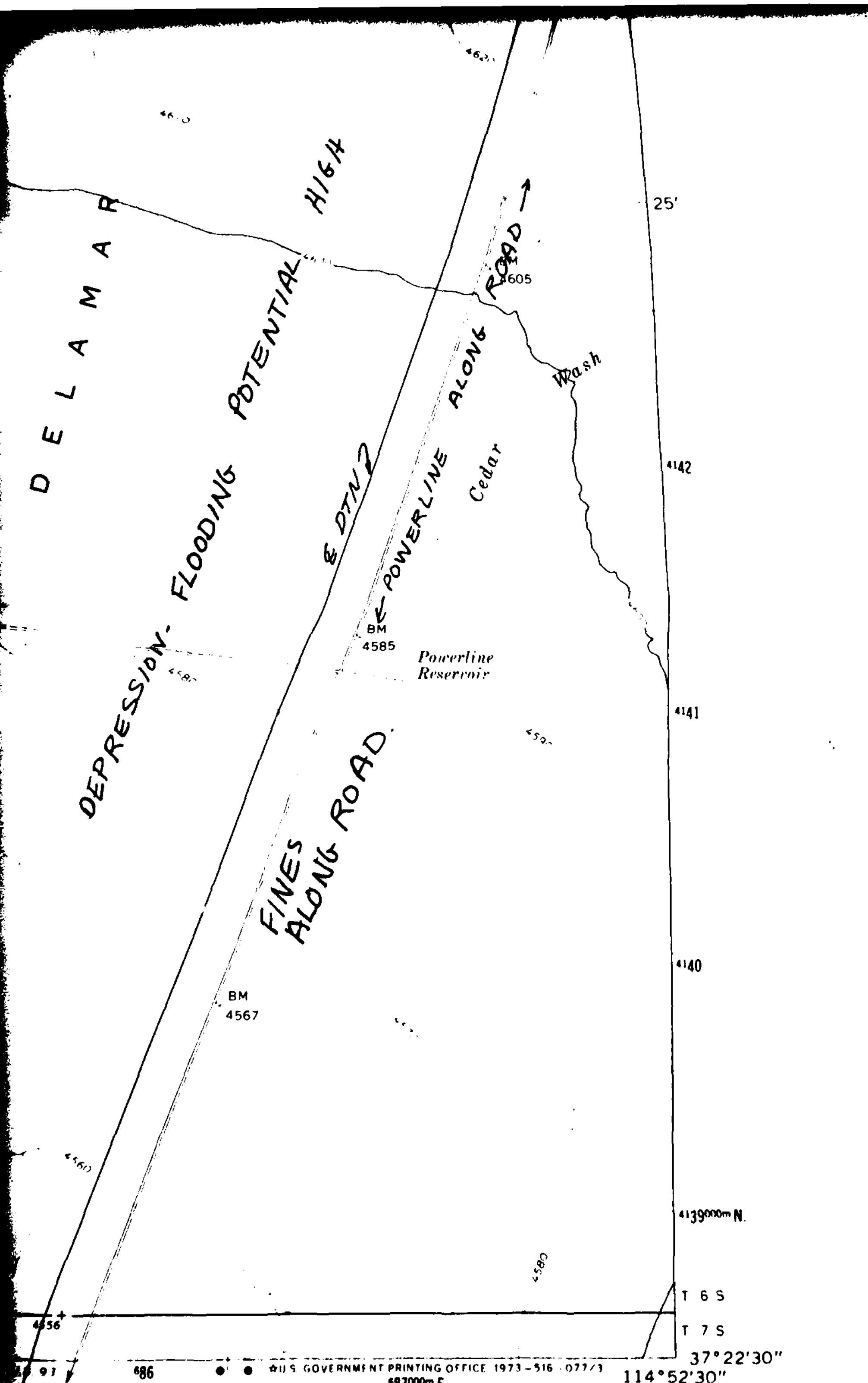
DELAMAR
N3722.5—W1
19

WITH NATIONAL MAP ACCURACY STANDARDS
EY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
APHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface	———	Light-duty road, hard or improved surface	
Secondary highway, hard surface	— — —	Unimproved road	

Interstate Route U S Route State Route

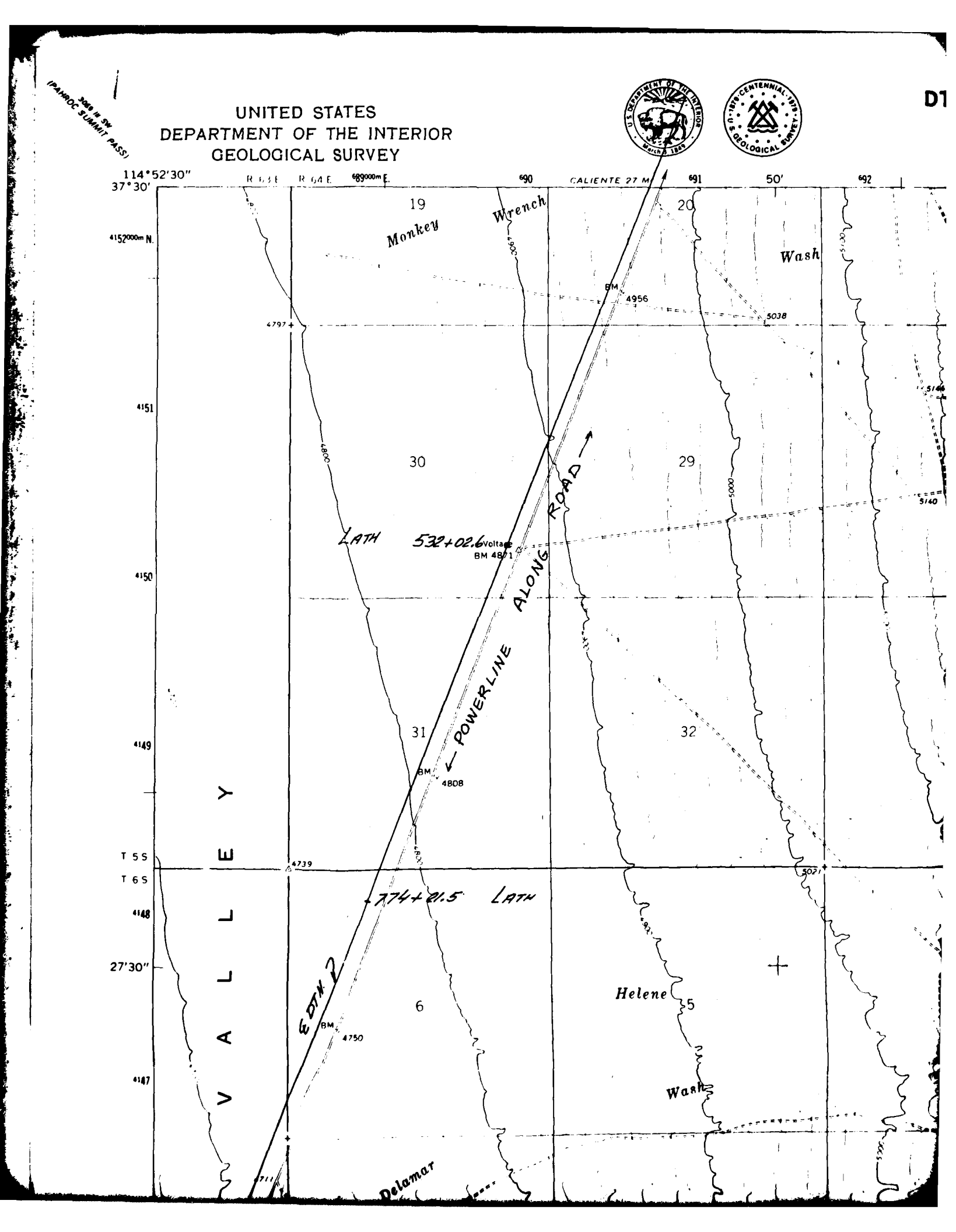
Ertec
The Earth Technology Corporation

DELAMAR NW, NEV.
N3722.5—W11452.5/7.5

1969

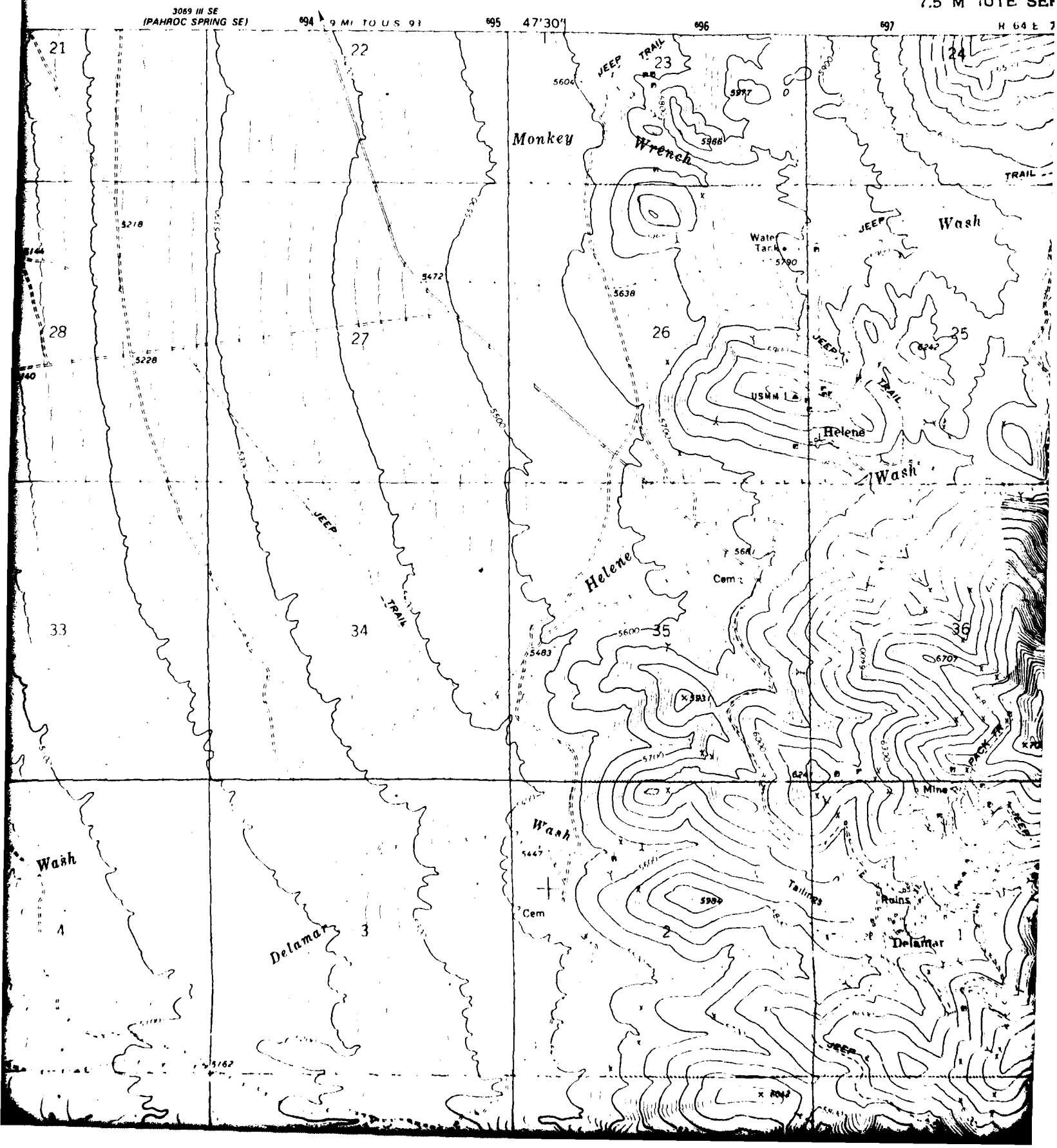
AMS 3058 IV NW—SERIES V896

9

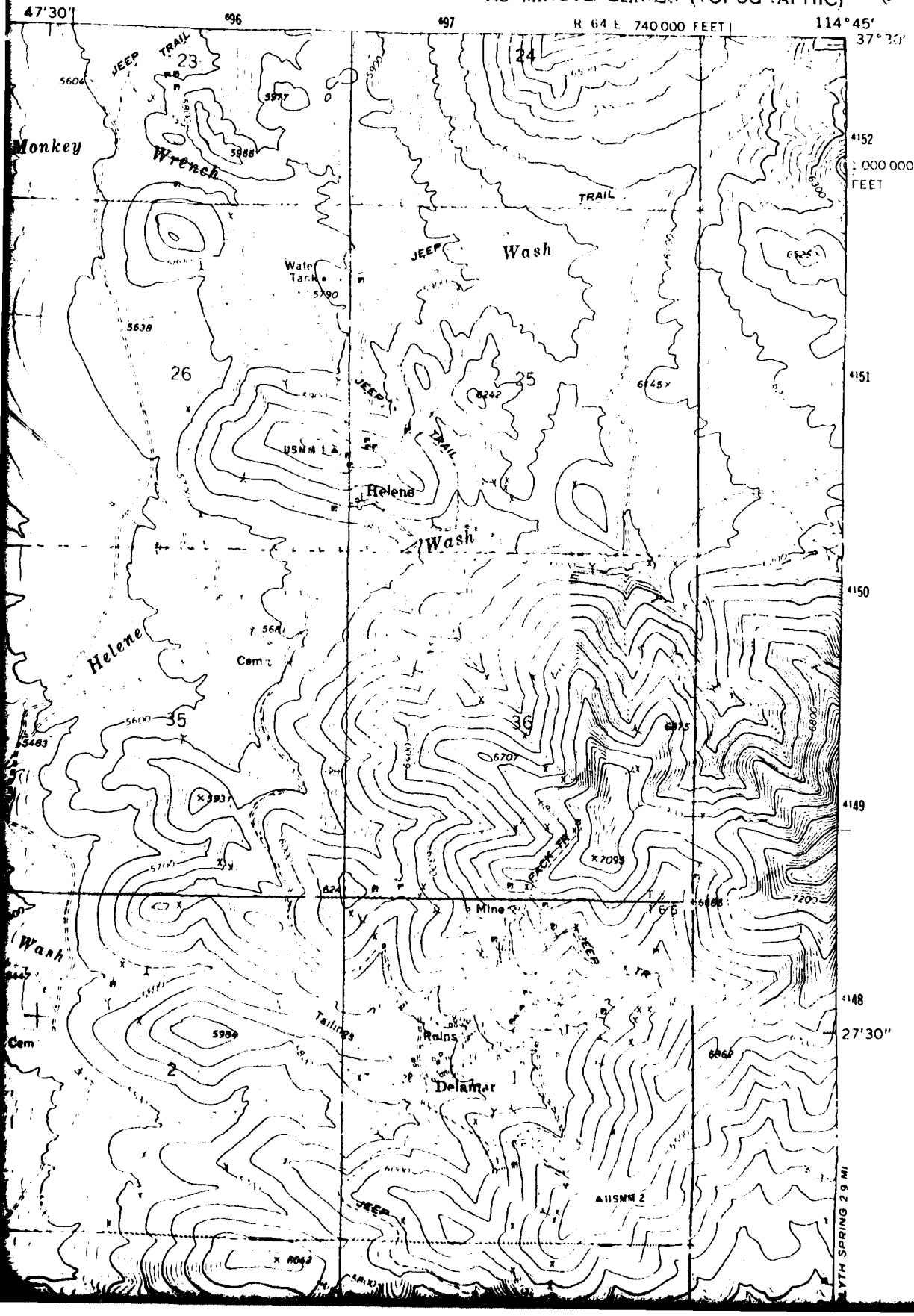

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
114°52'30"
37°30'
R 64 E
689000m E.
690
CALIENTE 27 M
691
50'
692
4152000m N.
19
Monkey
Wrench
20
Wash
BM 4956
5038
4797
4151
30
29
LATH 532+02.6 Voltage
BM 4871
POWERLINE ALONG ROAD
4150
31
32
BM 4808
4149
T 5 S
T 6 S
4739
5021
774+21.5 LATH
4148
27'30"
6
Helene
5
BM 4750
4147
Wash
Delamar
VALLEY

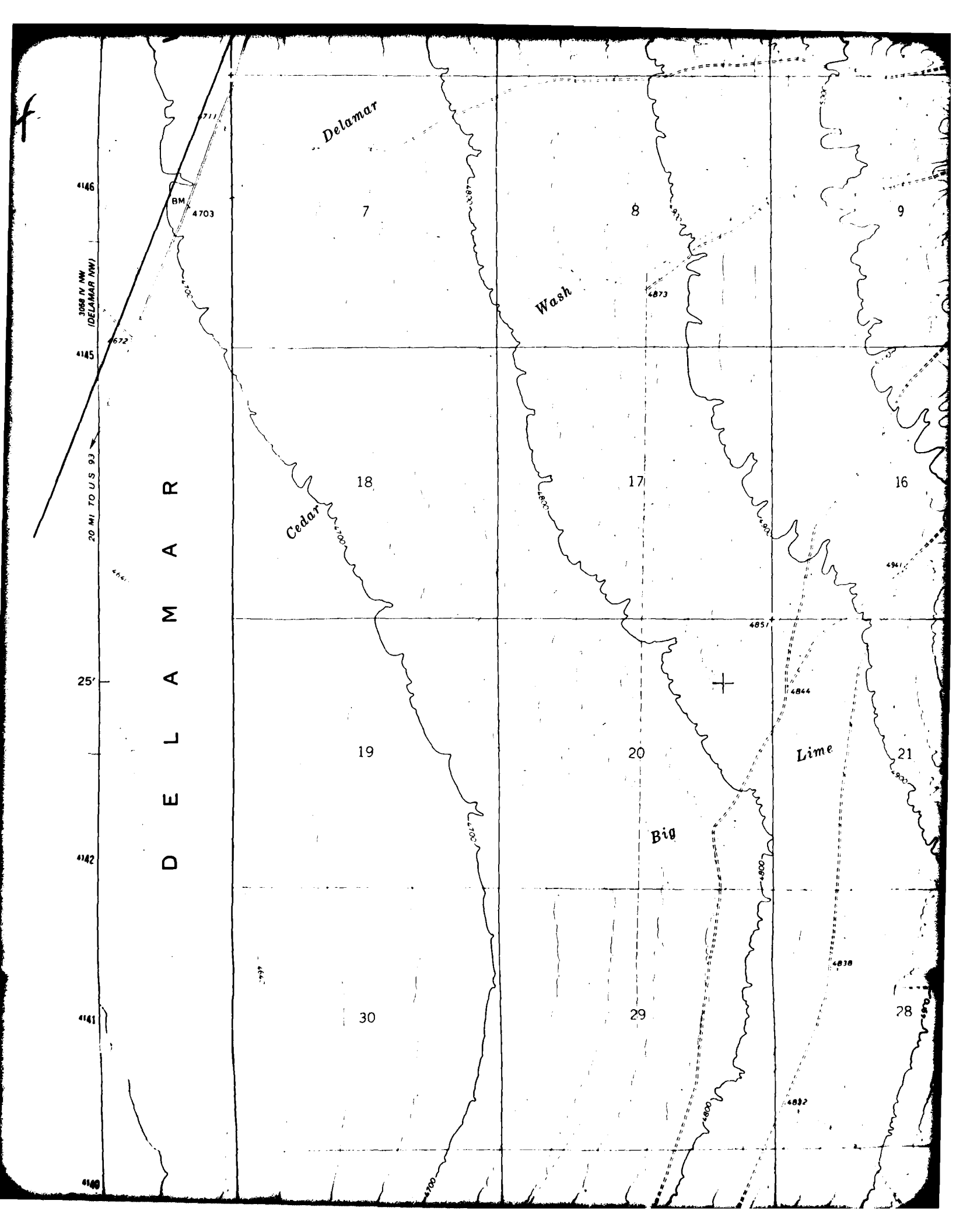
L

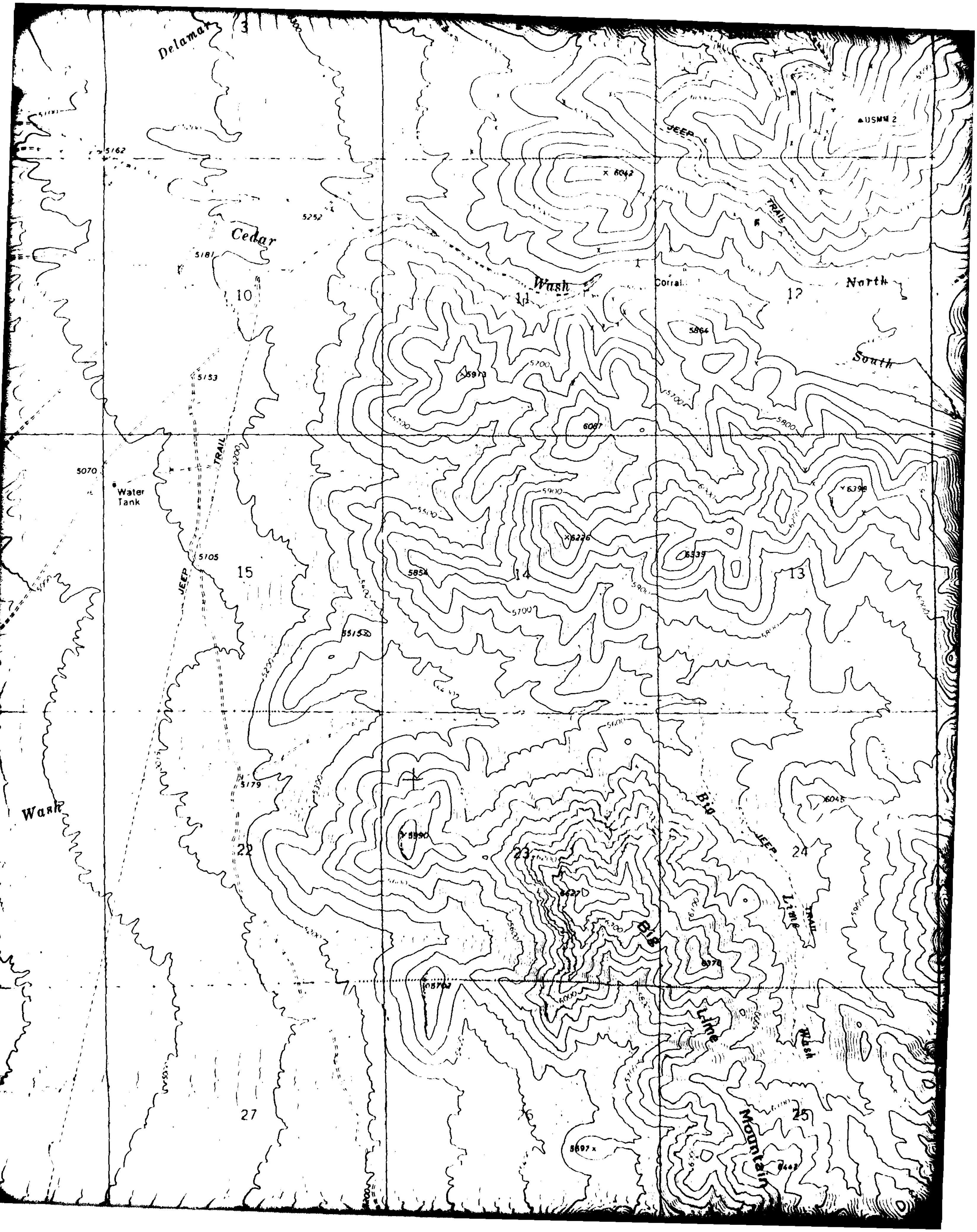
DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B



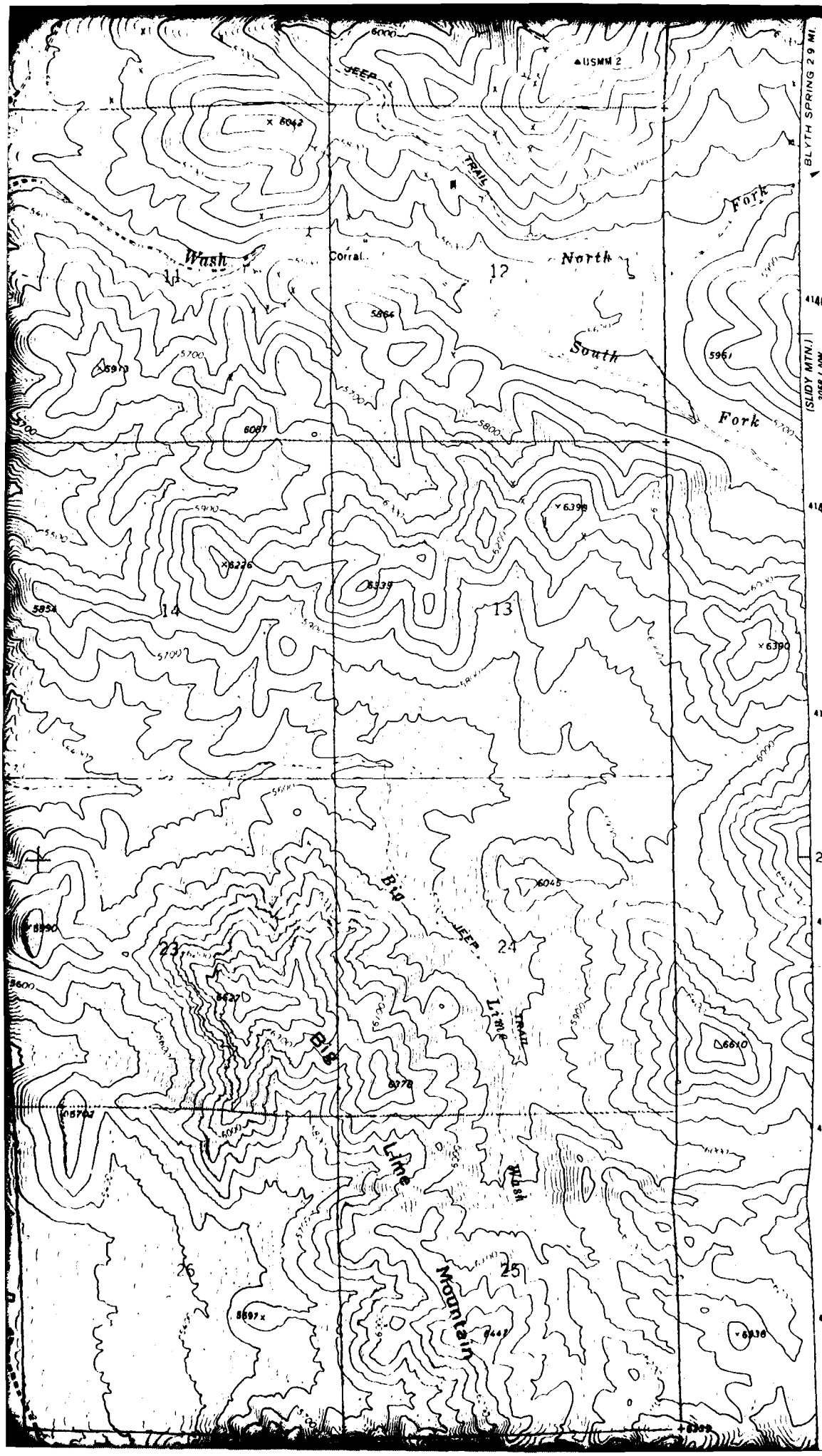
DELAMAR QUADRANGLE
NEVADA - LINCOLN CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

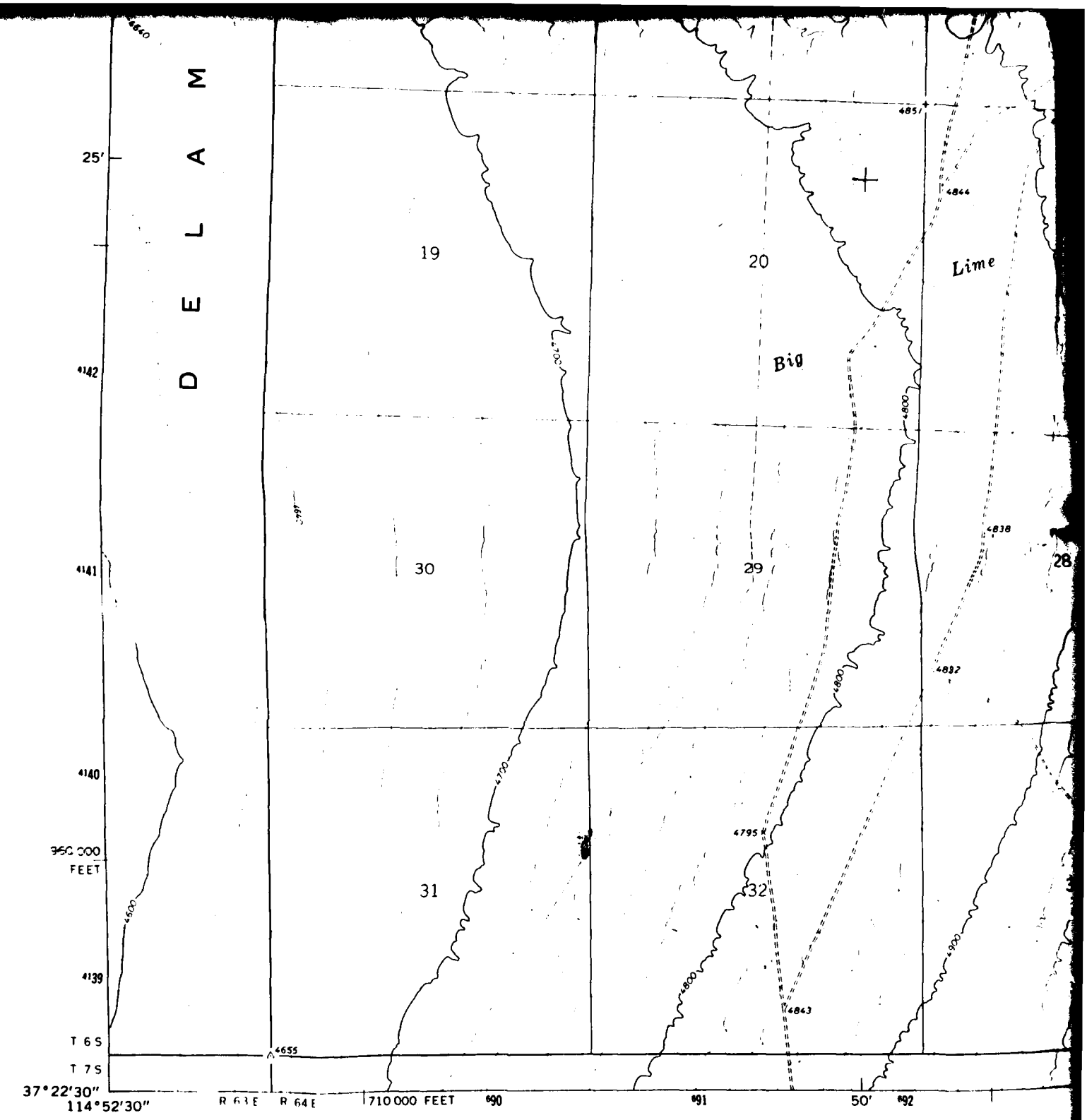



Delamar
Wash
Cedar
Lime
Big
DELAMAR
7
8
9
18
17
16
19
20
21
30
29
28
BM 4703
4873
4851
4844
4838
4832
4672
4711
4964
4941
4700
4800
4900
4146
4145
4142
4141
4140
3068 IV NW
(DELAMAR NW)
20 MI TO U S 93



Delamar
Cedar
Wash
Corral
North
South
Water Tank
JEEP TRAIL
Big Lime
Big Lime Wash
Big Lime Mountain
USMM 2


BLYTH SPRING 2.9 MI.
(SLIDY MTN.) 3058 I NW
USMM 2
JEEP
TRAIL
Wash
Corral
North
Fork
South
Fork
Big
Lime
Trail
Lime
Wash
Mountain
12
13
14
23
24
25
26
4146
4145
4144
4143
4142
4141
25'



(DELAMA LAKE) 3658 IV SW

Mapped, edited, and published by the Geological Survey

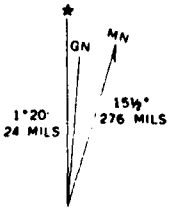
Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1969

Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue

Fine red dashed lines indicate selected fence lines

Where omitted, land lines have not been established

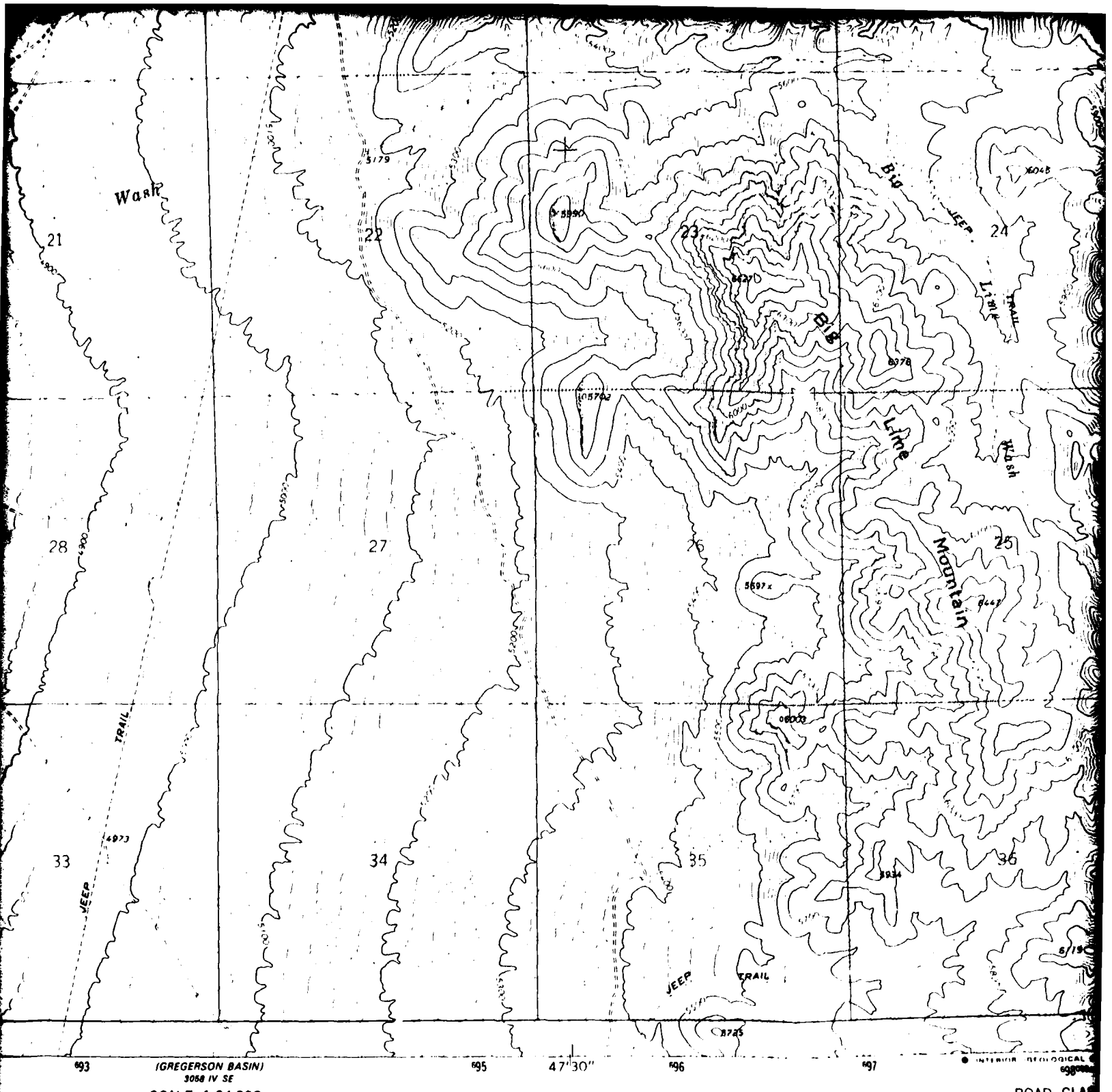


UTM GRID AND 1969 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000 0 1

FOR SALE BY U. S. GE
A FOLDER DE

1



(GREGERSON BASIN)
3058 IV SE

SCALE 1:24 000

0 1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLAS

Primary highway, hard surface

Secondary highway, hard surface

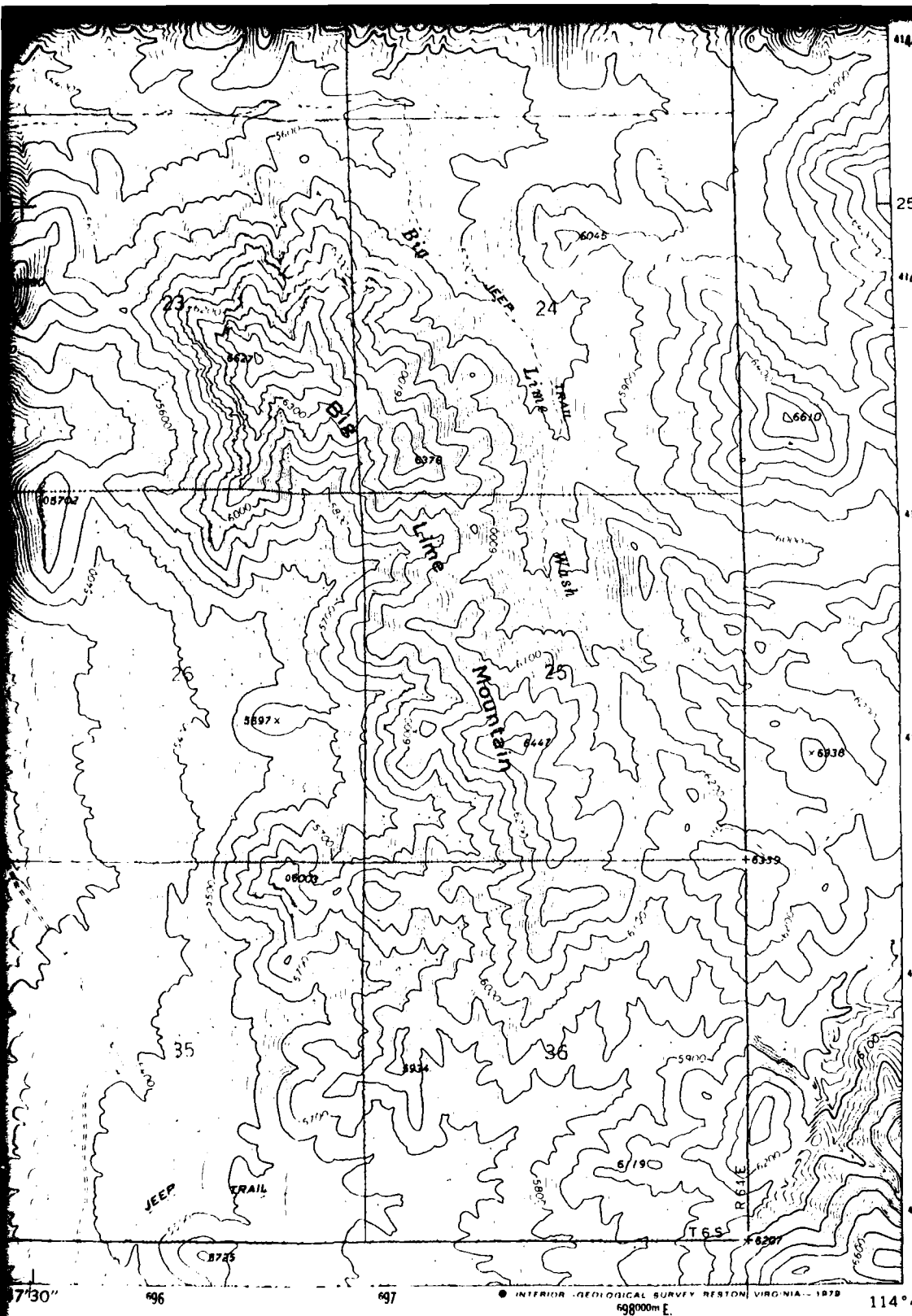
Interstate Route

NEVADA

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec
The Earth Technology Corporation



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1979

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

( ) Interstate Route ( ) U. S. Route ( ) State Route

QUADRANGLE LOCATION

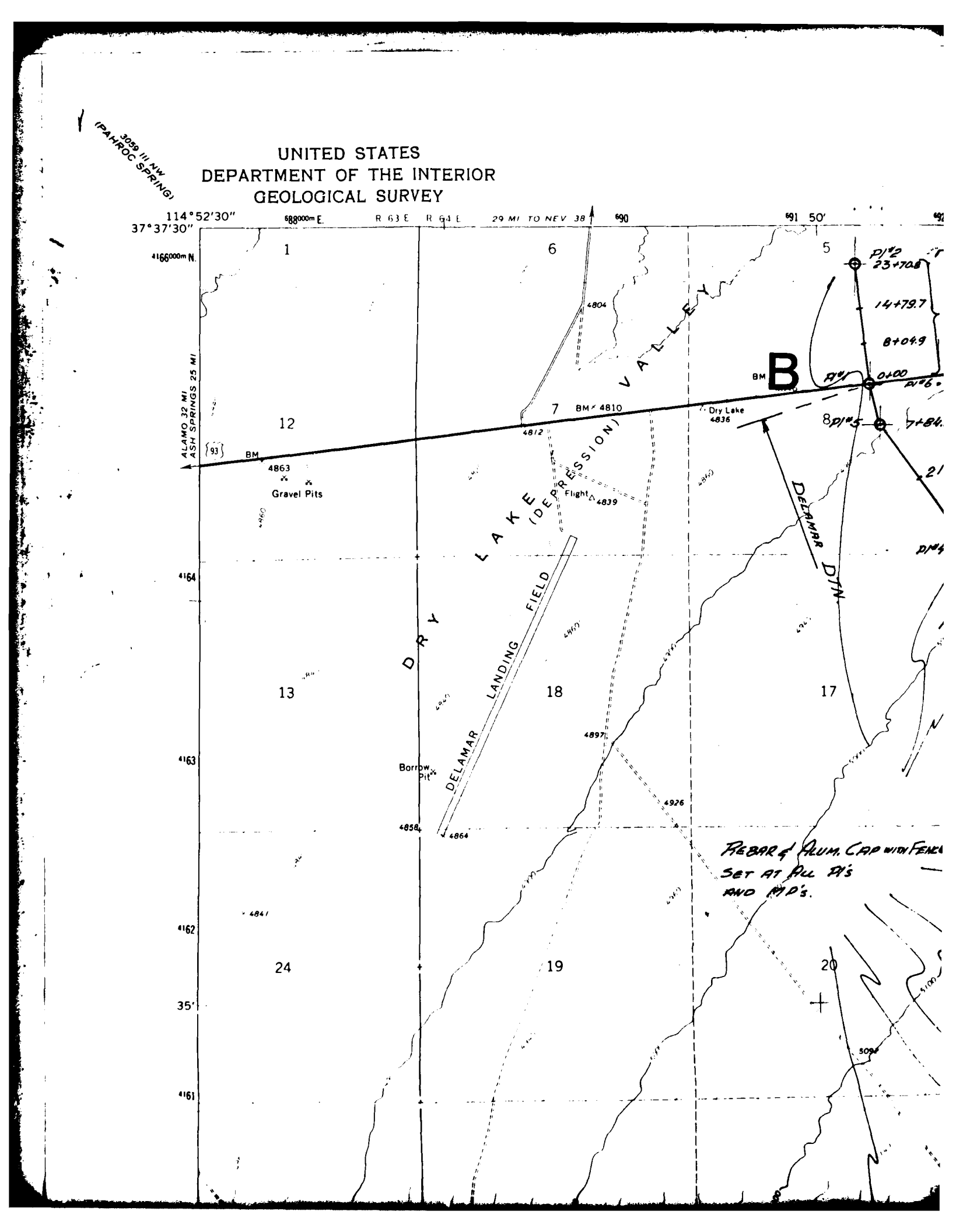
Ertec
The Earth Technology Corporation

DELAMAR, NEV.

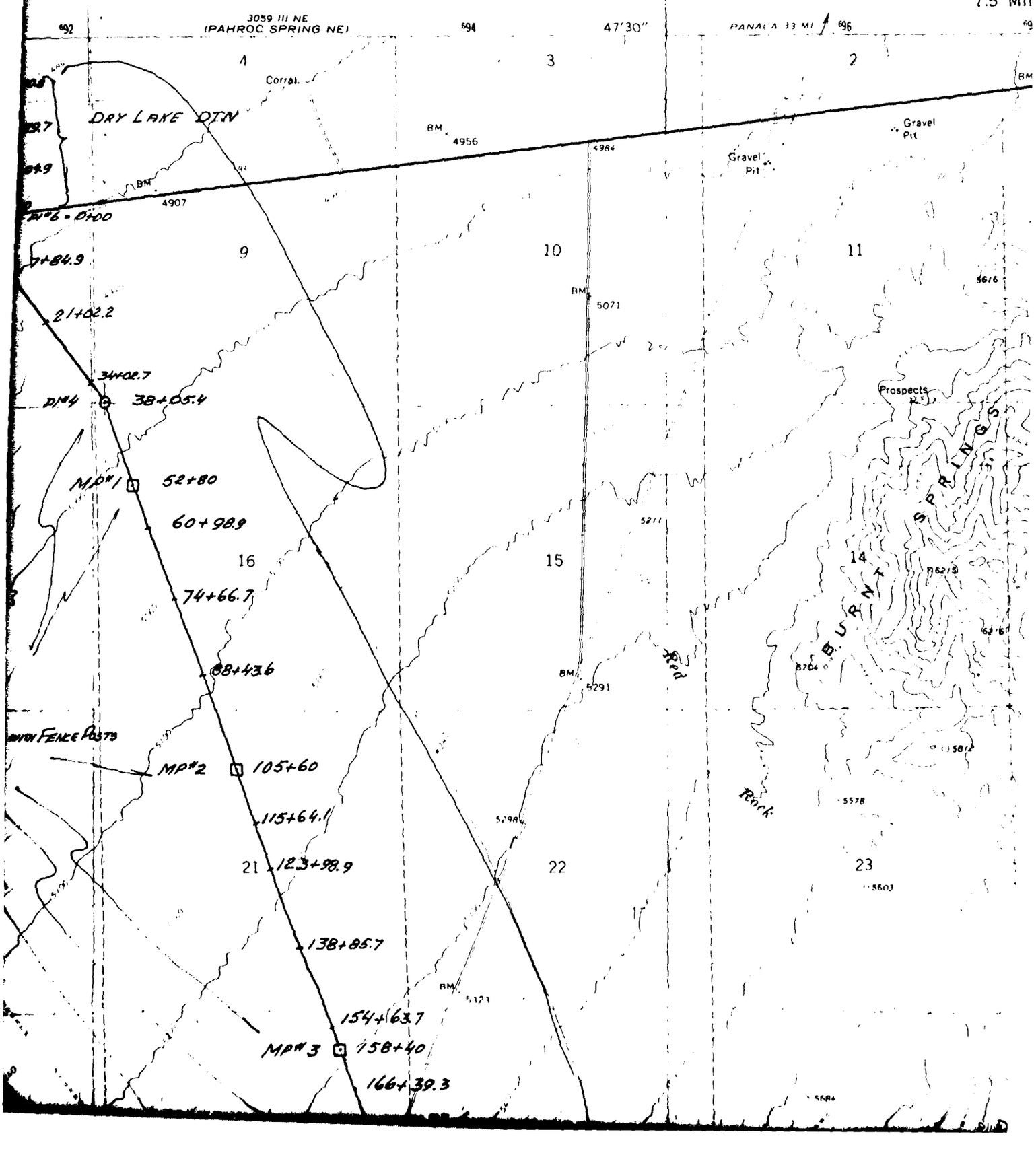
N3722.5—W11445/7.5

1969

AMS 3058 IV NE—SERIES V896

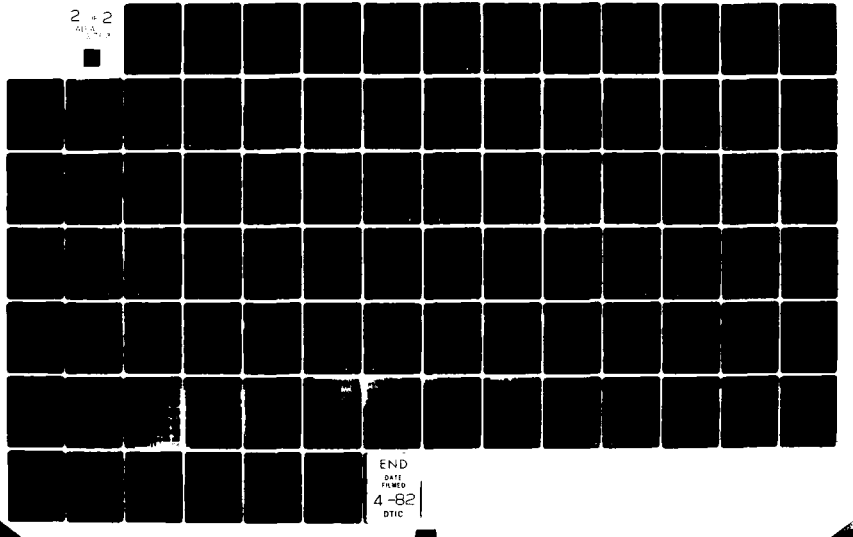

3059 III NW
(PAHROC SPRING)
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
114°52'30"
37°37'30"
688000m E.
R 63 E
R 64 E
29 MI TO NEV 38
690
691 50'
4166000m N.
ALAMO 32 MI
ASH SPRINGS 25 MI
93
BM
4863
Gravel Pits
DRY LAKE (DEPRESSION) VALLEY
BM 4810
4812
4804
Dry Lake
4836
Flight
4839
DELAMAR DTN.
DELAMAR LANDING FIELD
4897
4926
4858
4864
Borrow Pit
4841
4164
4163
4162
4161
35'
1
6
5
12
7
8
13
18
17
24
19
20
B
REBAR & ALUM. CAP WITH FENCE
SET AT ALL PI's
AND PT's.

DTN/OBTS FIELD SURVEYS
NEVADA DTN
SEGMENT A-B

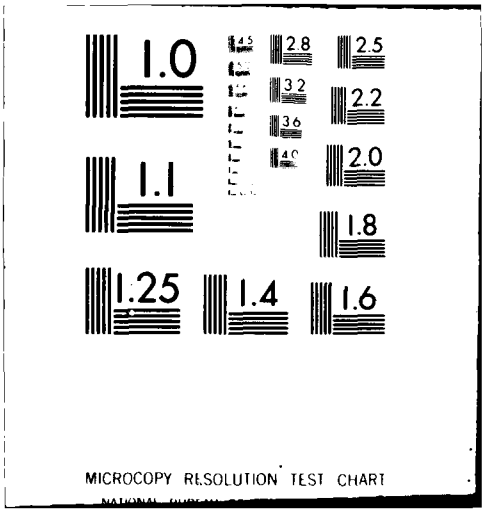


AD-A112 763 ERTEC WESTERN INC LONG BEACH CA F/G 8/6
MX SITING INVESTIGATION. DTN/OBTS FIELD SURVEYS. DATA COMPILATI--ETC(U)
NOV 81 F04704-80-C-0006
UNCLASSIFIED E-TR-59-1 NL

2 of 2

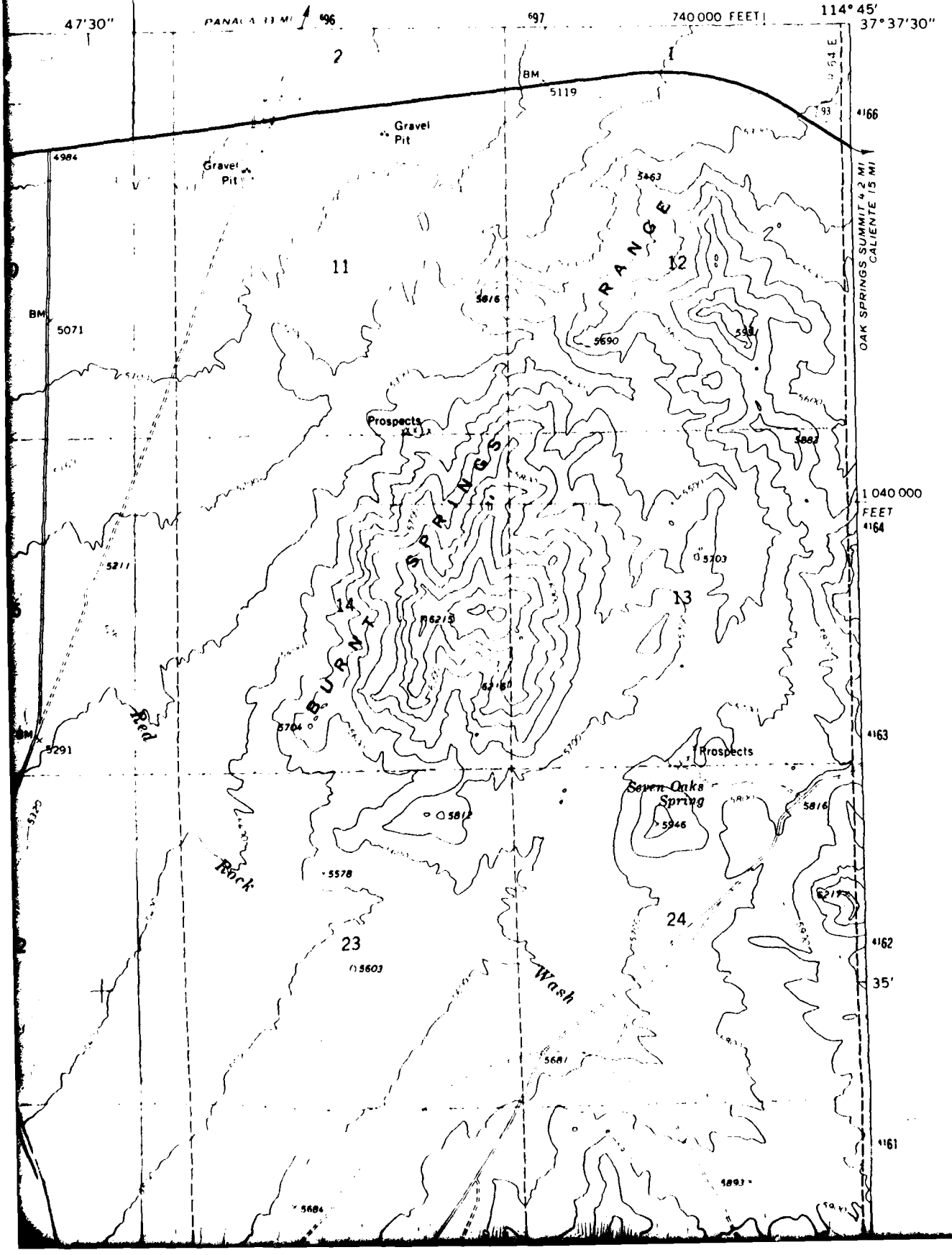


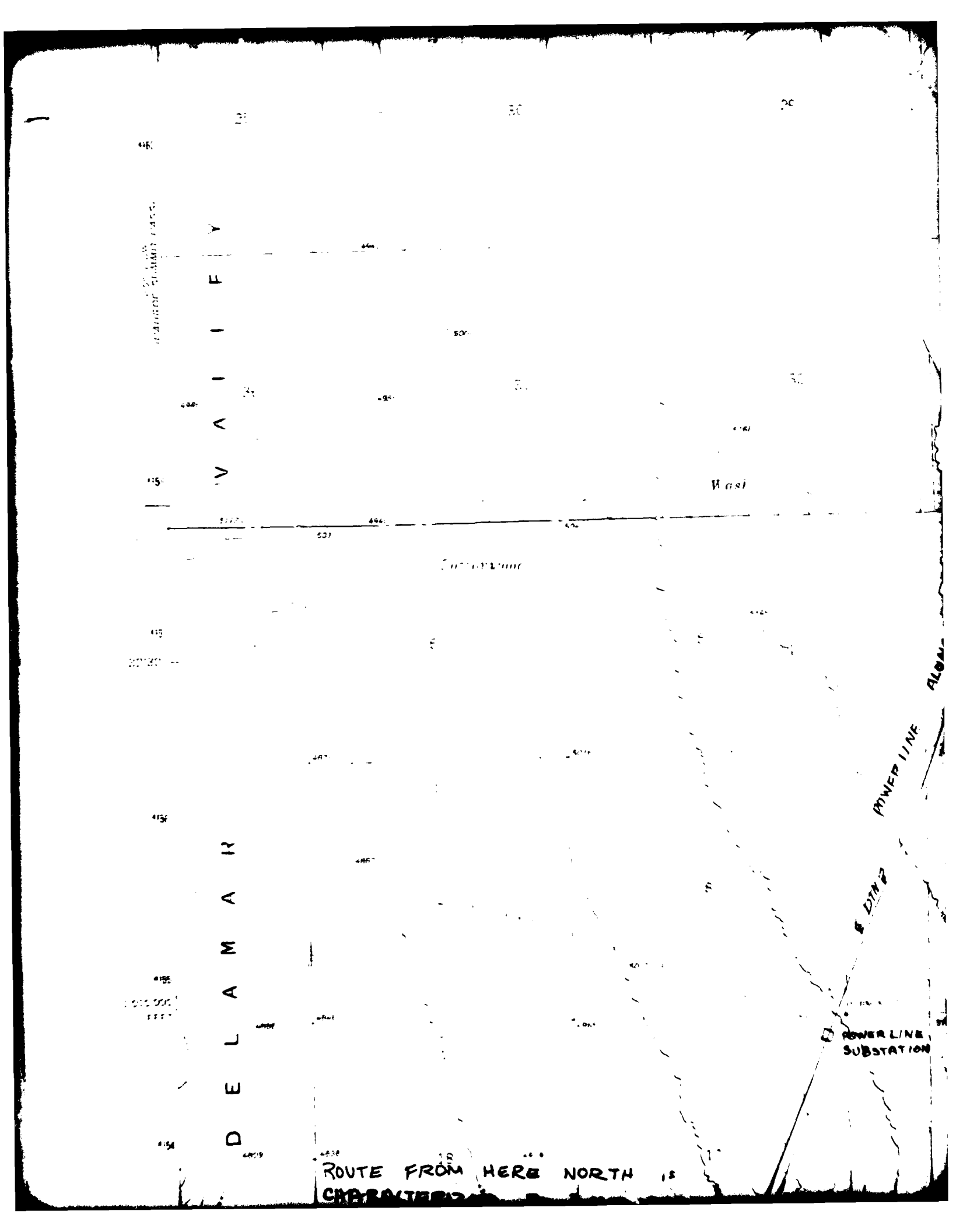
END
DATE FILMED
4-82
DTIC

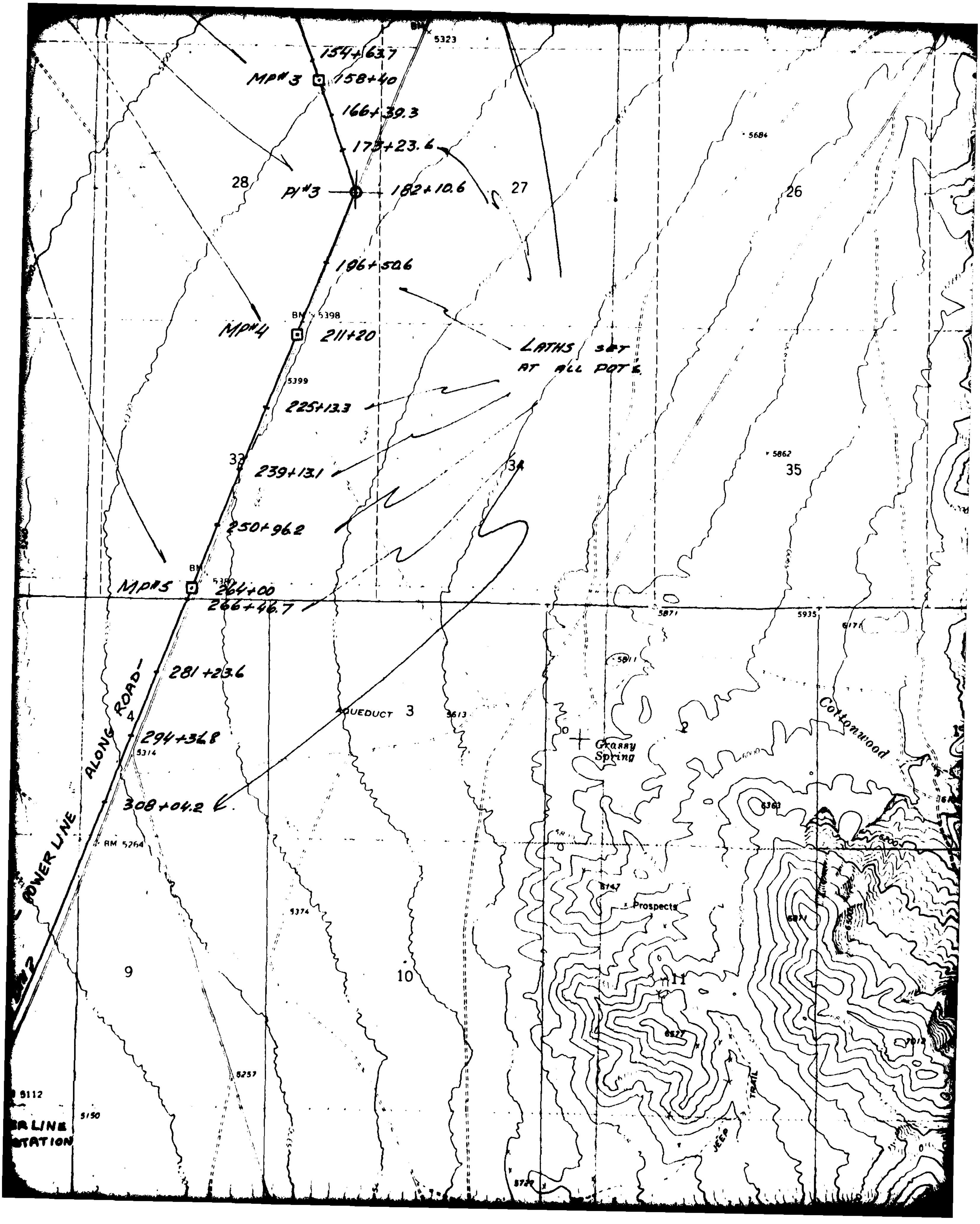

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
MICROCOPY RESOLUTION TEST CHART

PAHROC SPRING SE QUADRANGLE
NEVADA – LINCOLN CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

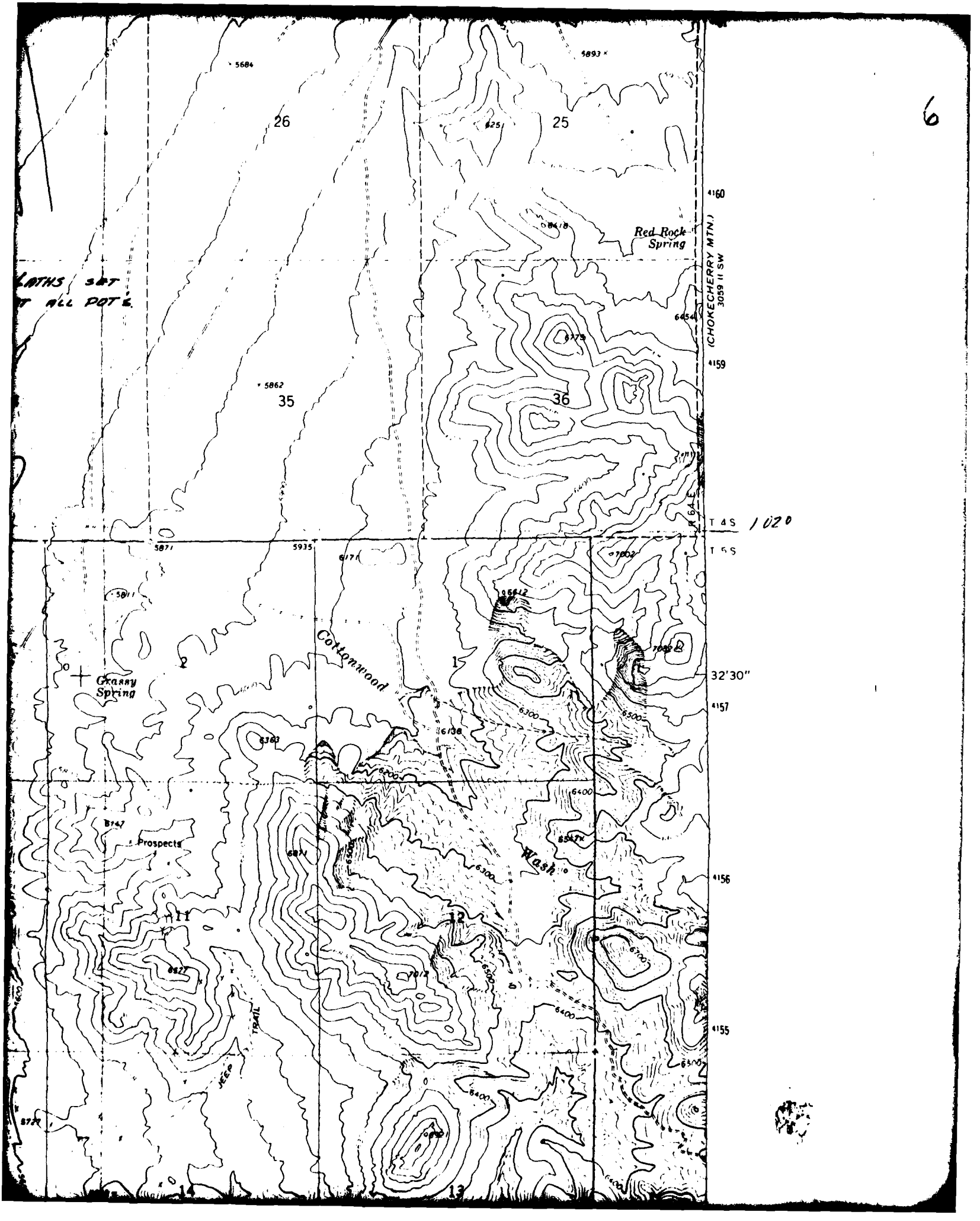
3059 II NW (CALIENTE NW)




DELAMAR
VALLEY
West
POWER LINE
POWER LINE
SUBSTATION
ROUTE FROM HERE NORTH IS



154+63.7
MP#3
158+40
166+39.3
173+23.6
PI#3
182+10.6
196+50.6
MP#4
211+20
LATHS SET AT ALL POTS.
225+13.3
239+13.1
250+96.2
MP#5
264+00
266+46.7
281+23.6
294+36.8
308+04.2
POWER LINE ALONG ROAD
BM 5323
BM 5398
5399
BM 5264
5314
AQUEDUCT
Grassy Spring
Prospects
Cottonwood
JEEP TRAIL
28
27
26
33
34
35
4
3
2
9
10
11
5684
5862
5871
5935
5811
5613
5374
5257
5112
5150
5363
6877
5747
7012
5737
LINE
STATION



6

LATHS SET
AT ALL POTS

1020

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

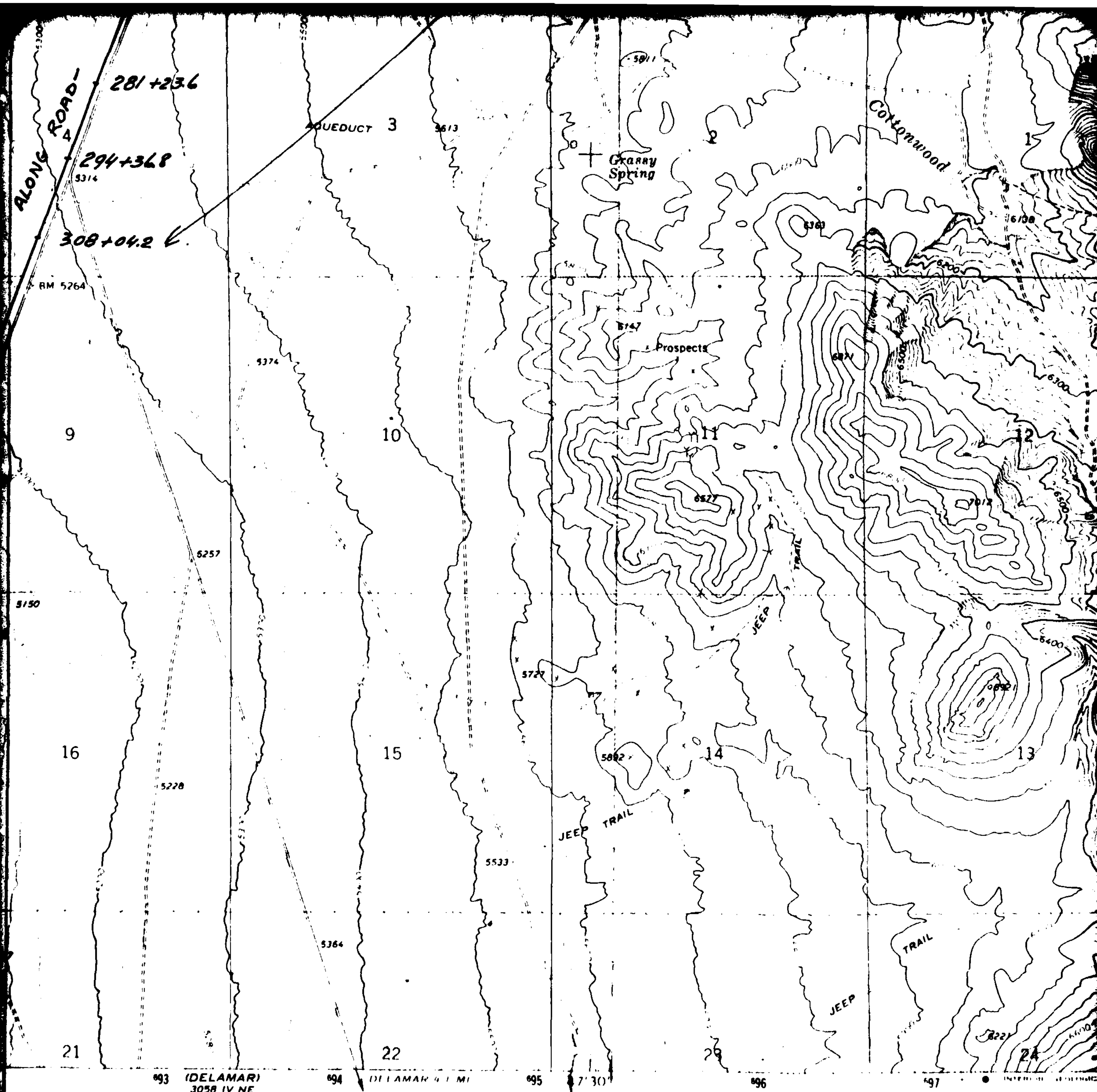
Topography by photogrammetric methods from aerial photographs taken 1969. Field checked 1970

Polyconic projection. 1927 North American datum
10,000-foot grid based on Nevada coordinate system, east zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue

Fine red dashed lines indicate selected fence lines

Where omitted, land lines have not been established

FOR SALE BY



SCALE 1:24 000

1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CL

Primary highway, hard surface

Secondary highway, hard surface

Interstate Route

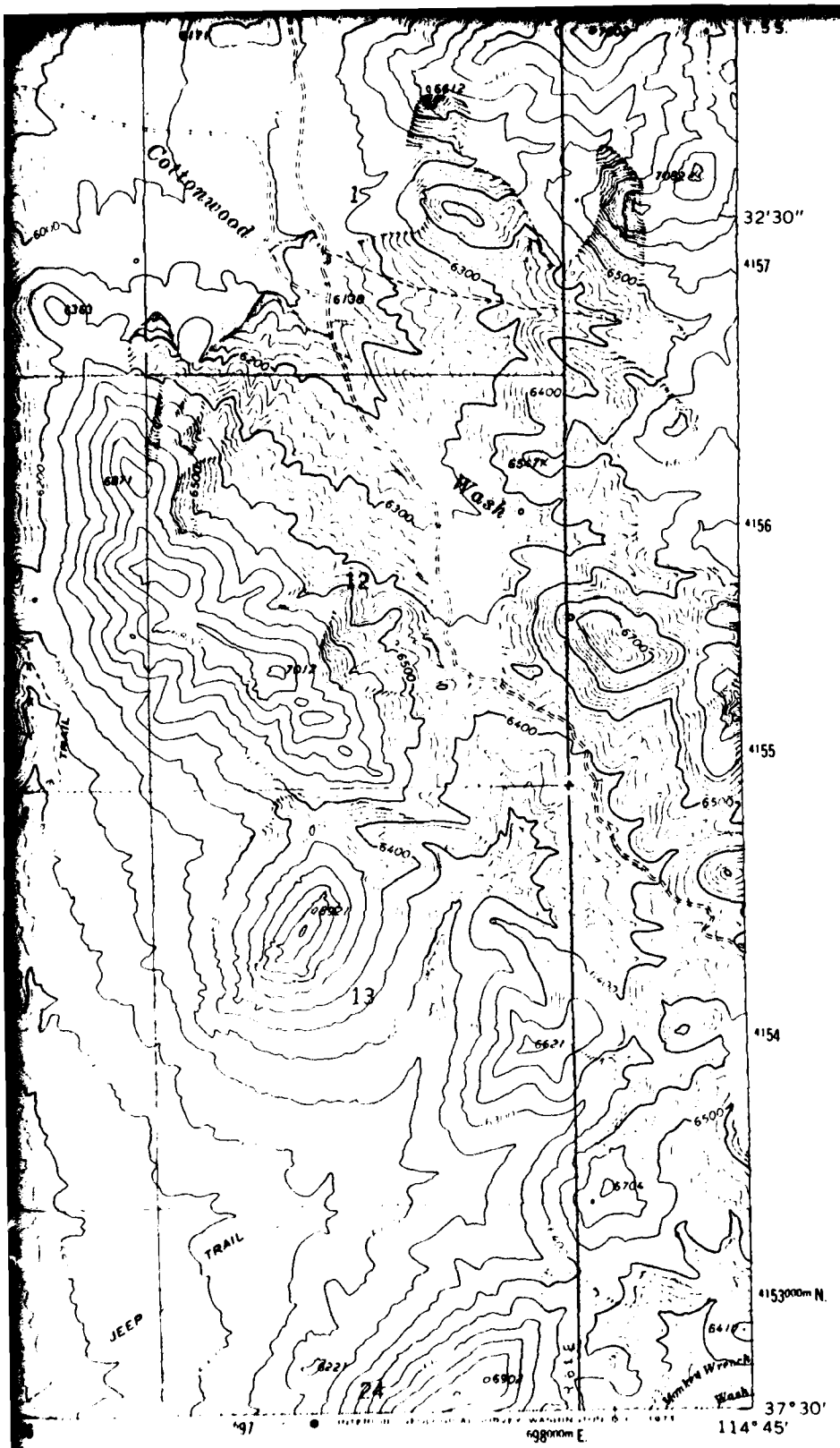
NEVADA

QUADRANGLE LOCATION

PAH

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
DER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec
The Earth Technology Corporation



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U. S. Route State Route

(SLIDY MOUNTAIN) 3058 I NW

Ertec
The Earth Technology Corporation

PAHROC SPRING SE, NEV.

N3730—W11445/7.5

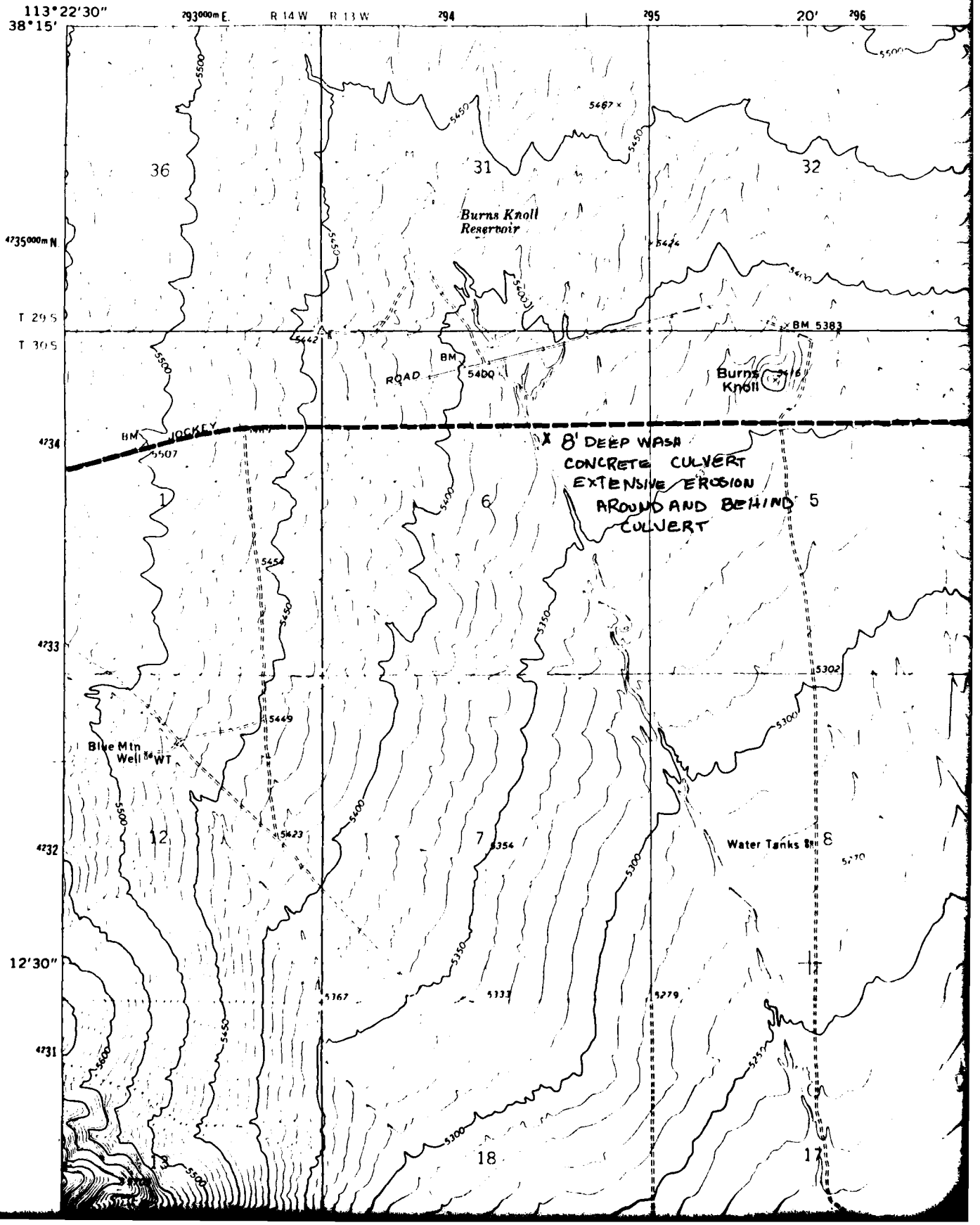
1970

9

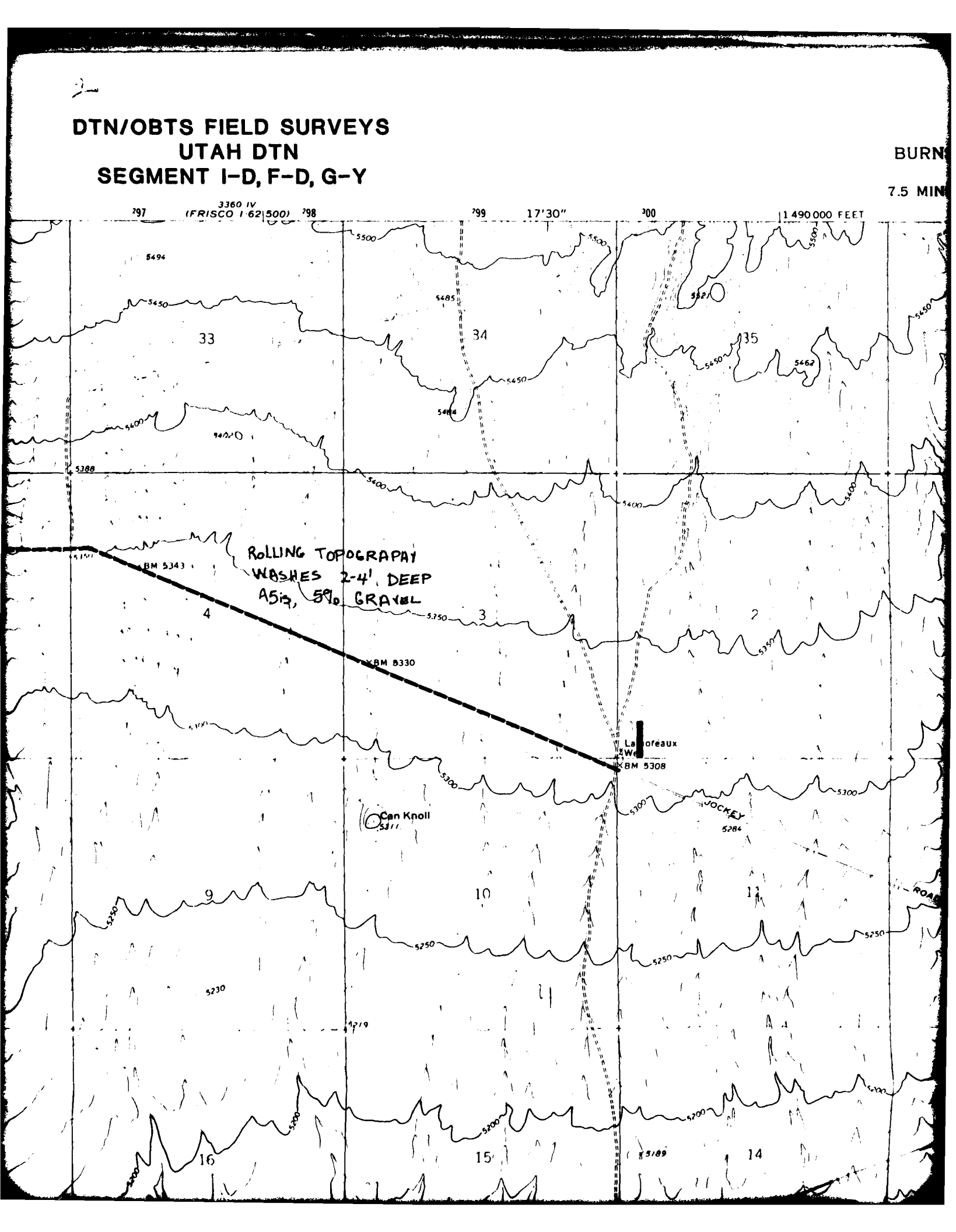
1

(1 MISCO 1.62 500)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



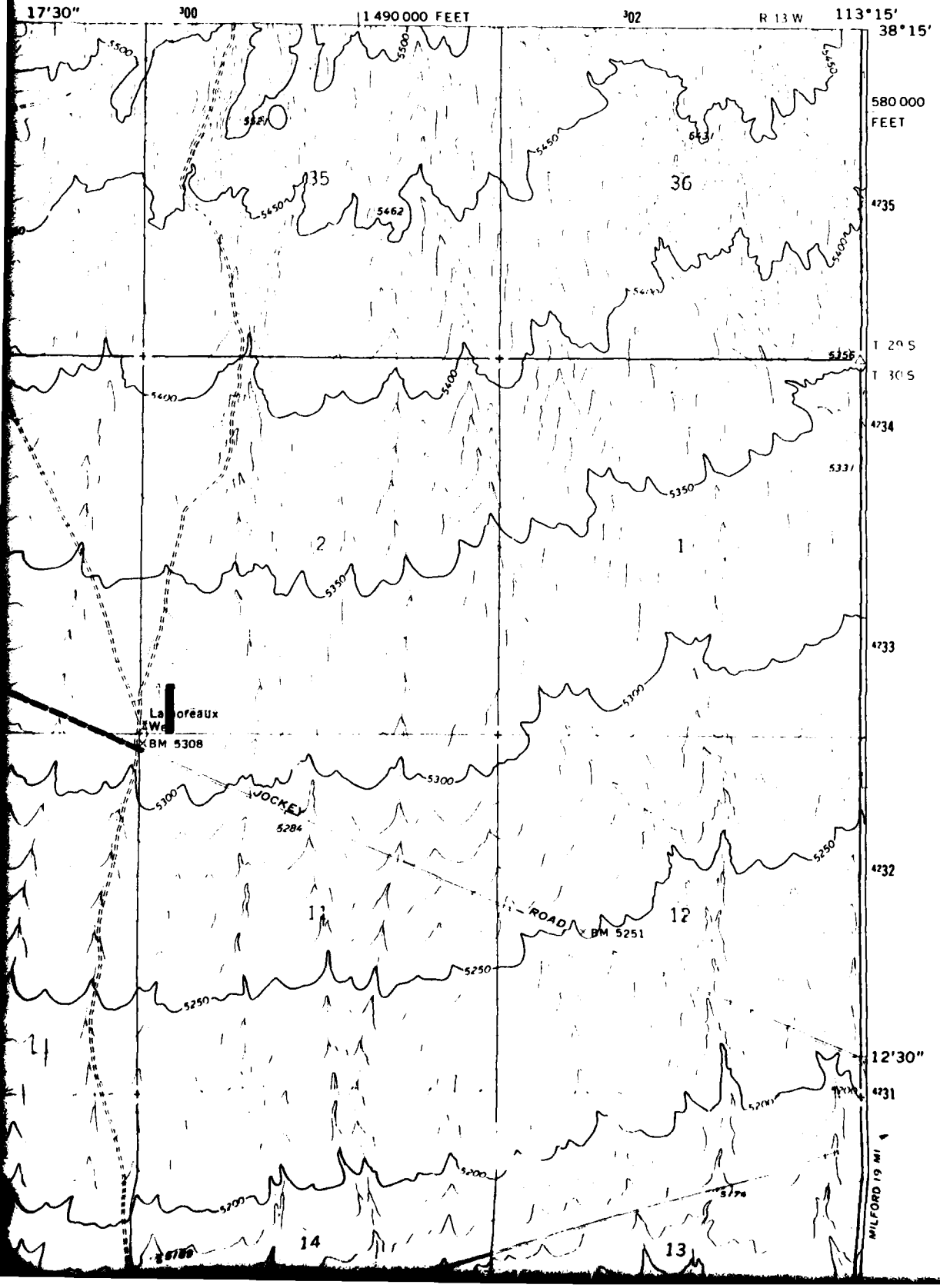
DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENT I-D, F-D, G-Y

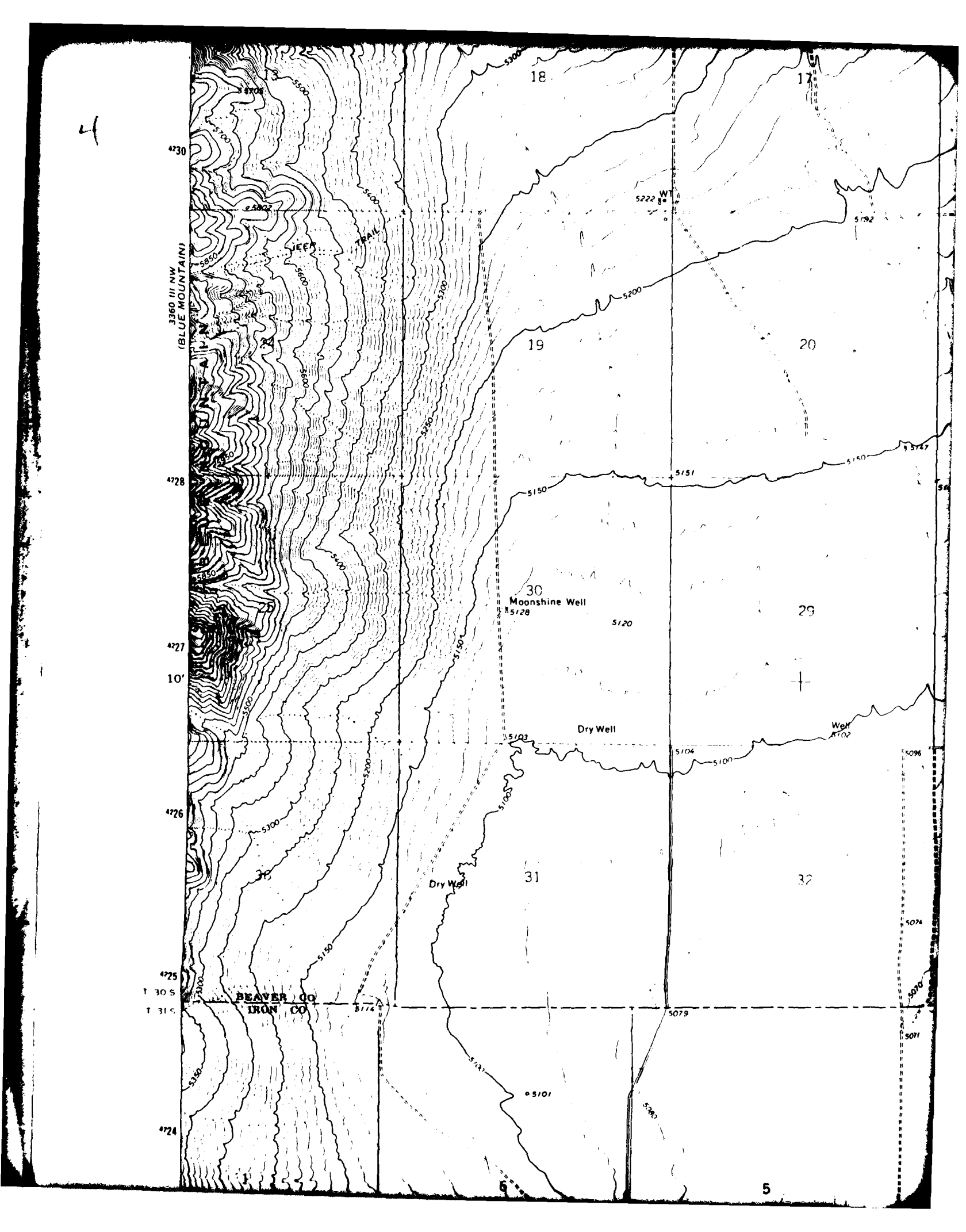


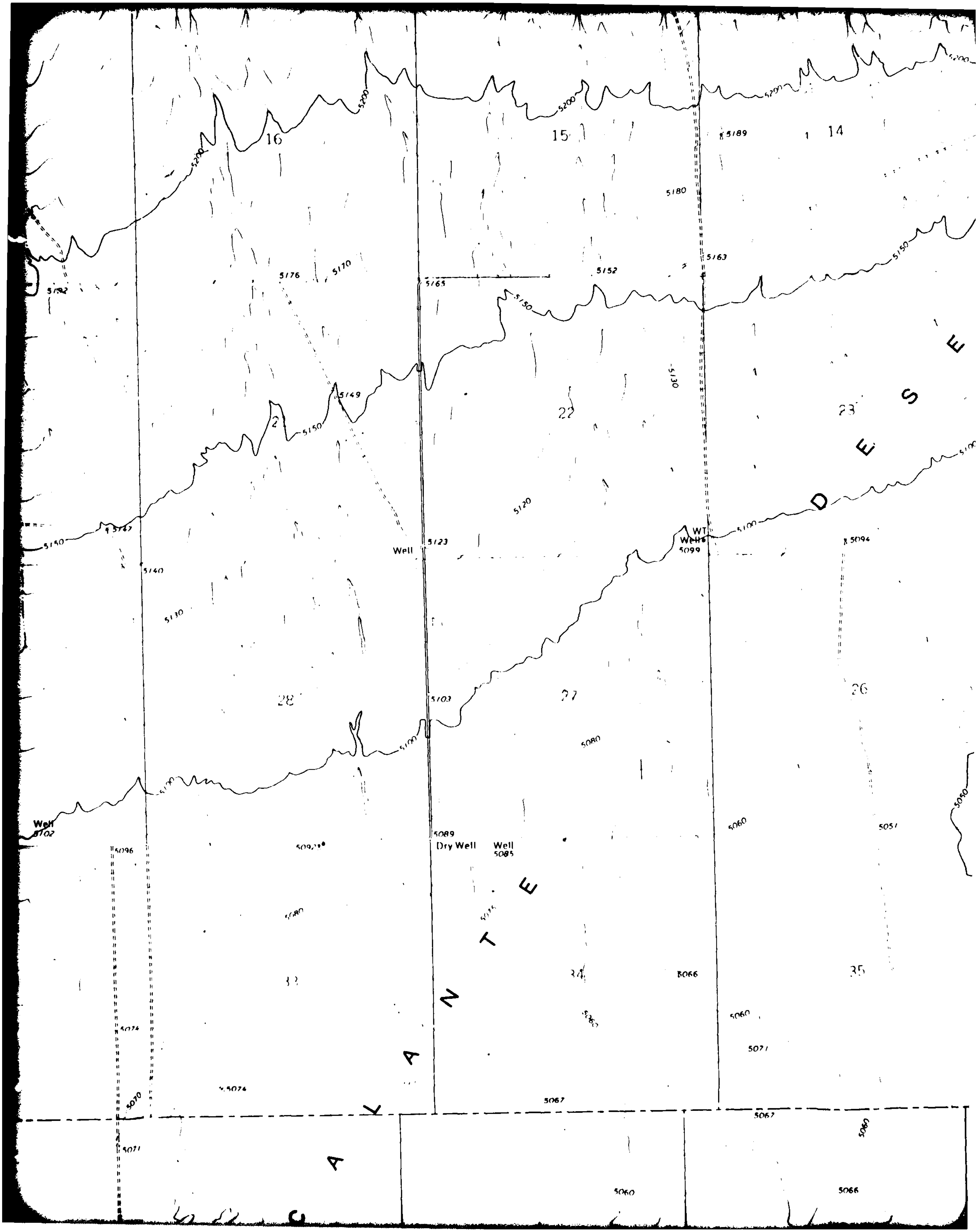
3

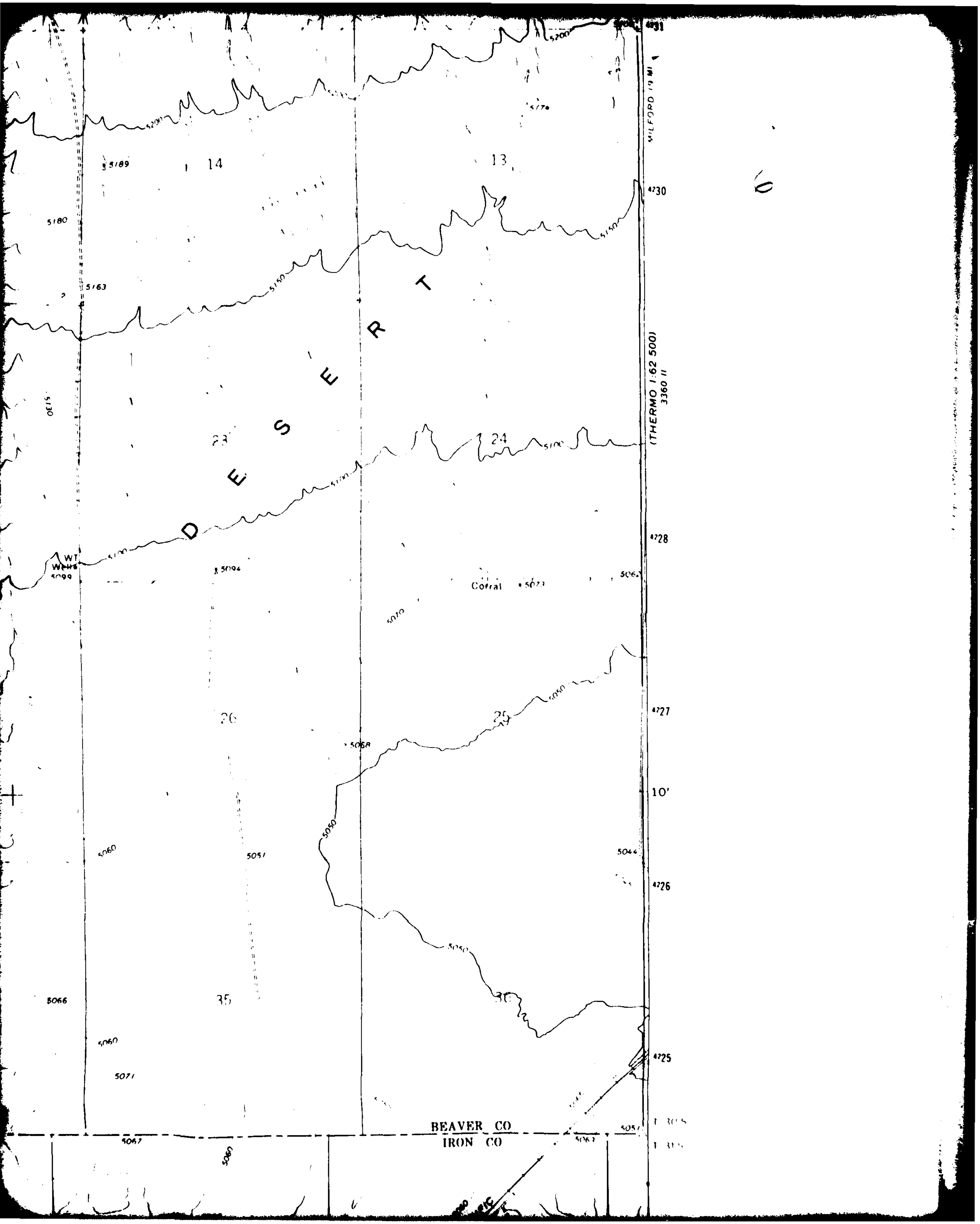
BURNS KNOLL QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)

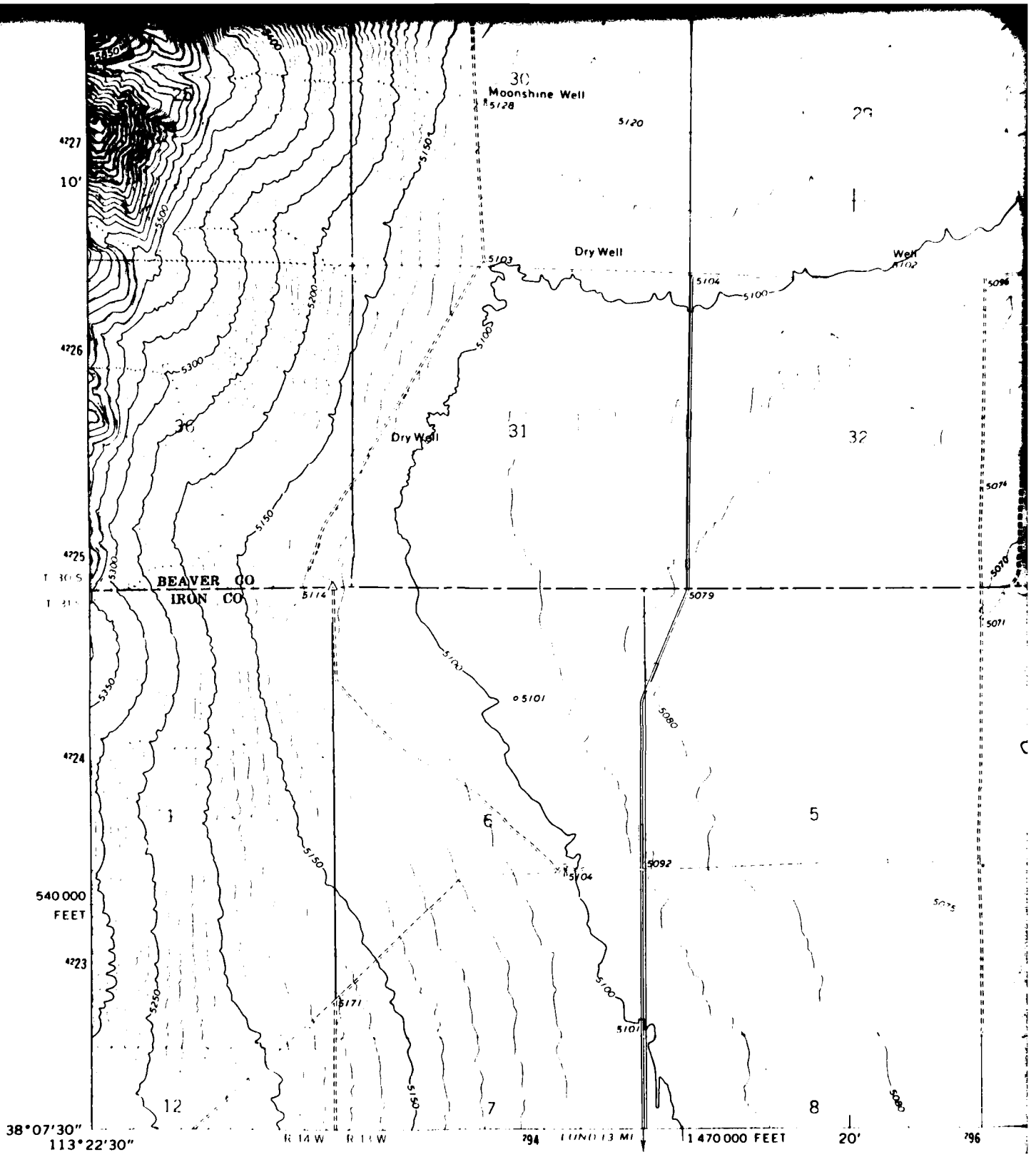
(MILFORD 1:62 500)




3360 III NW
(BLUE MOUNTAIN)
JEEP TRAIL
Moonshine Well
5128
Dry Well
Dry Well
Well
5102
BEAVER CO
IRON CO
T 30 S
T 31 S
18
17
19
20
30
29
31
32
5222 WT
5192
5151
5150
5120
5103
5104
5100
5096
5079
5076
5070
5071
5101
5114
4230
4228
4227
4226
4225
4224
10'


16
15
14
5200
5189
5180
5176
5170
5192
5165
5152
5163
5150
5149
5130
22
23
D E S E
5120
5100
5147
5140
Well
5123
WT
Well
5099
5094
5130
28
27
26
5103
5080
5050
Well
5102
5096
5089
Dry Well
Well
5085
5060
5051
E
5080
T
34
5066
35
N
5074
5060
A
5071
5074
5070
5067
L
5067
5060
5071
A
C
5060
5066


MILFORD 19 MI
5200
14
13
5189
5180
5163
5150
4230
DESERT
(THERMO 1:62 500)
3360 II
23
24
5100
WT
Wells
5099
5094
Corral
4228
26
25
5050
5068
4227
10'
5060
5057
5044
4226
5066
35
36
4225
5071
BEAVER CO
IRON CO
5067
5060



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1971

Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

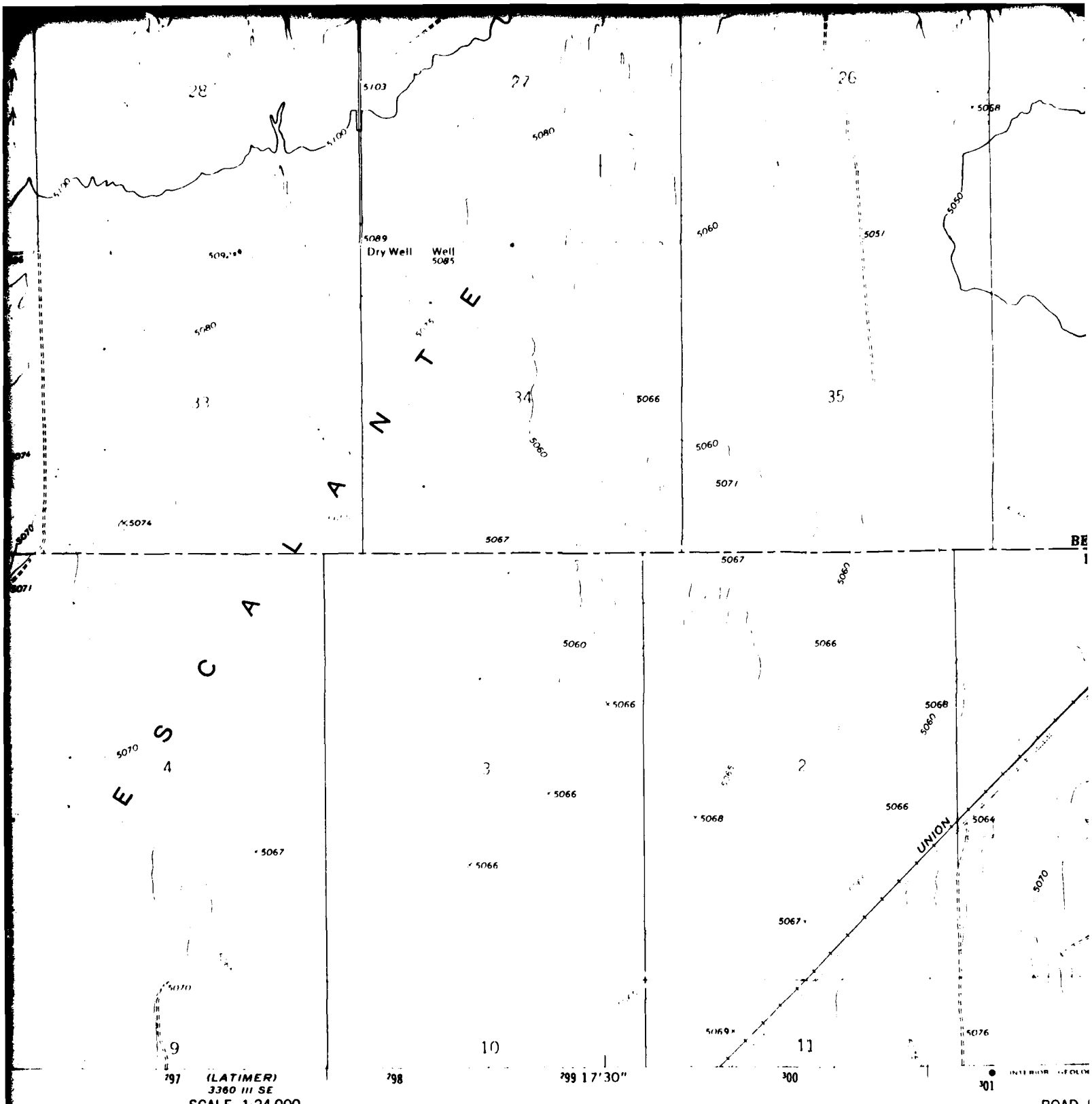
Fine red dashed lines indicate selected fence lines

(LUND)
3360 III SW

GN
MN
1°26'
25 MILS
15½°
276 MILS

UTM GRID AND 1971 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

FOR SALE BY U.S.
A FOLDER



SCALE 1:24 000

1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

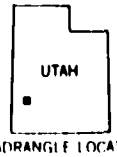
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD

Primary highway, hard surface

Secondary highway, hard surface

Interstate Route

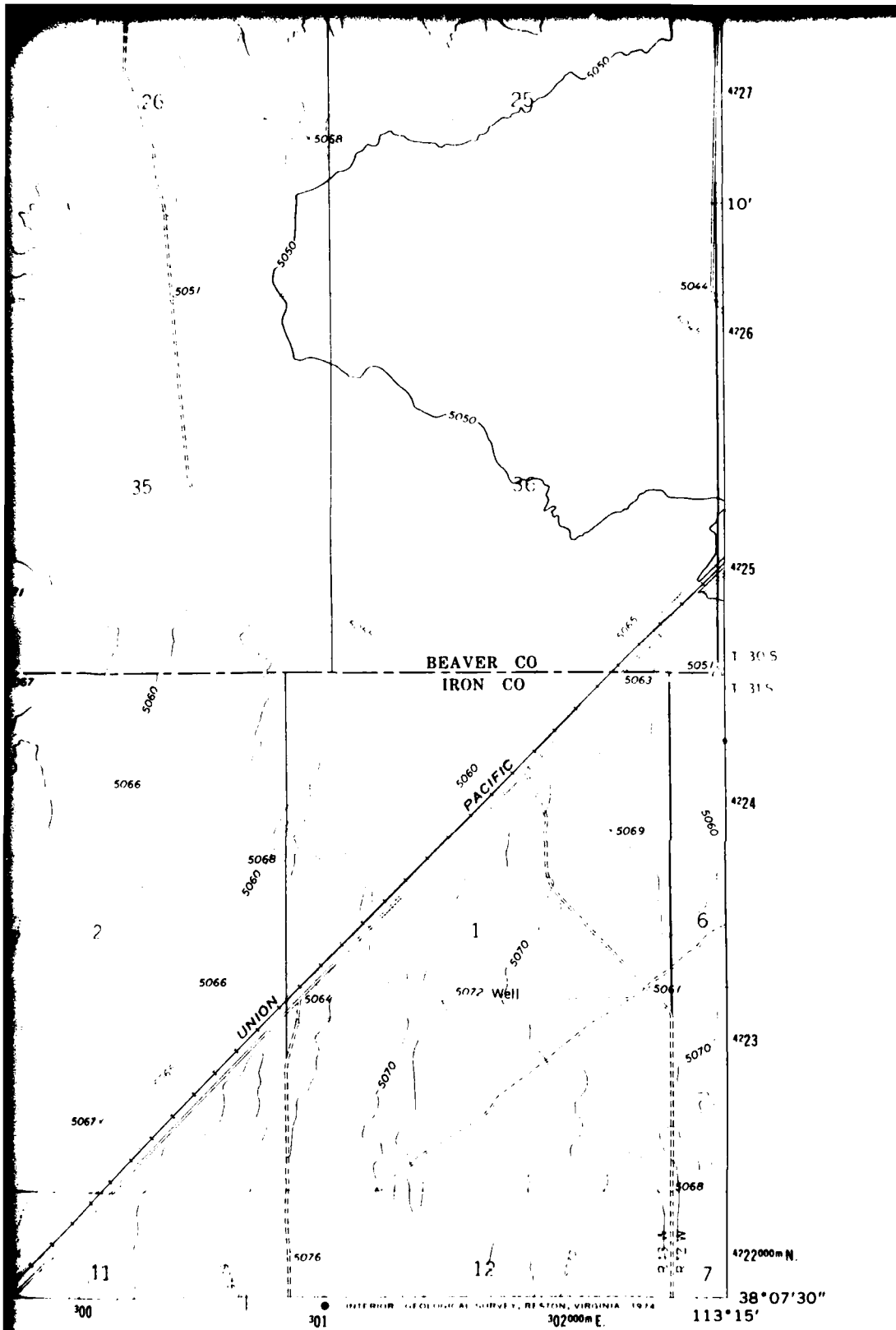


QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
LDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec
The Earth Technology Corporation

8



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

Interstate Route U S Route State Route

UTAH

LE LOCATION

Ertec
The Earth Technology Corporation

BURNS KNOLL, UTAH

N3807.5—W11315/7.5

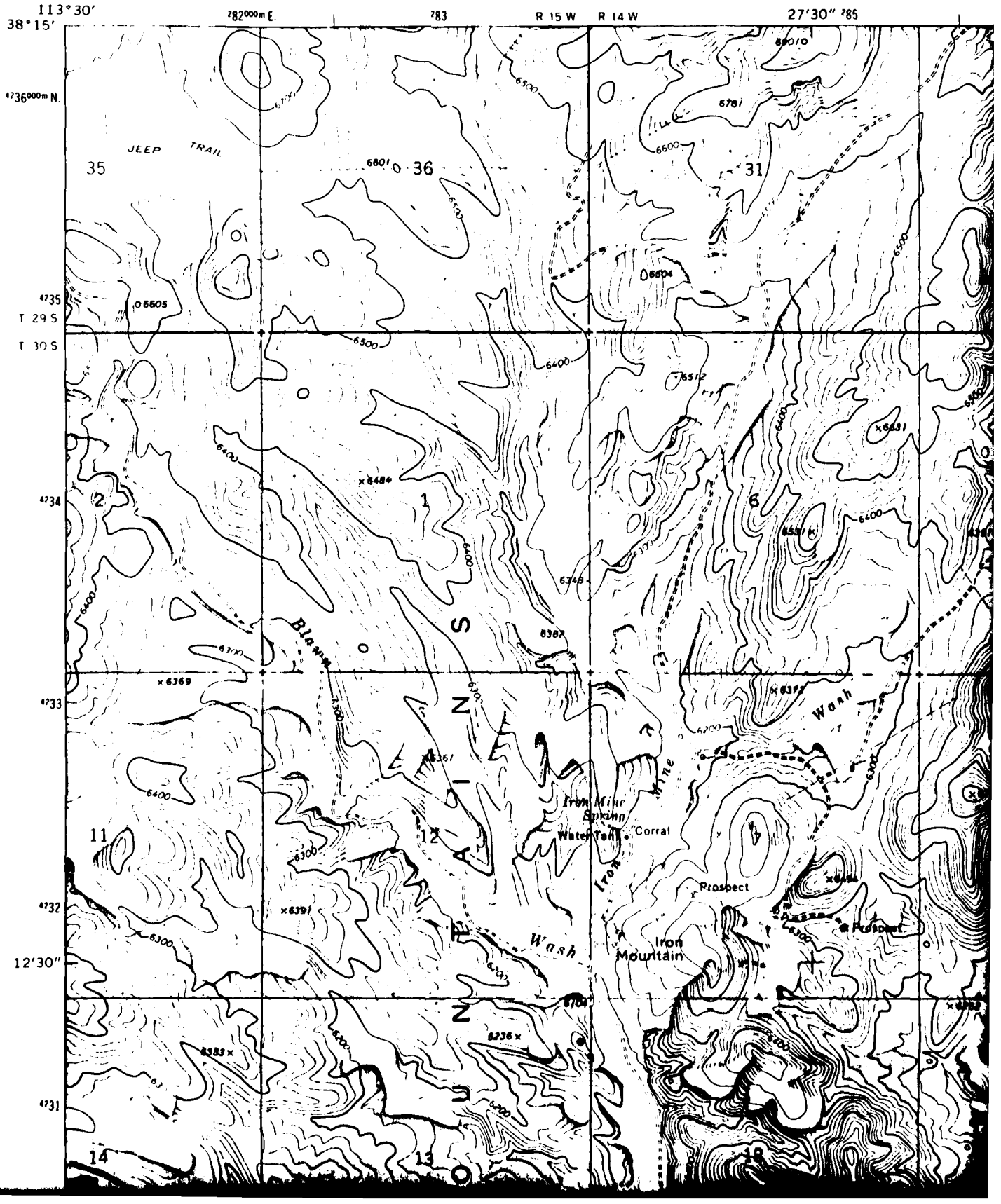
1971

AMS 3360 III NE—SERIES V897

4

3260 I SE
(LAMERDORF PEAK)

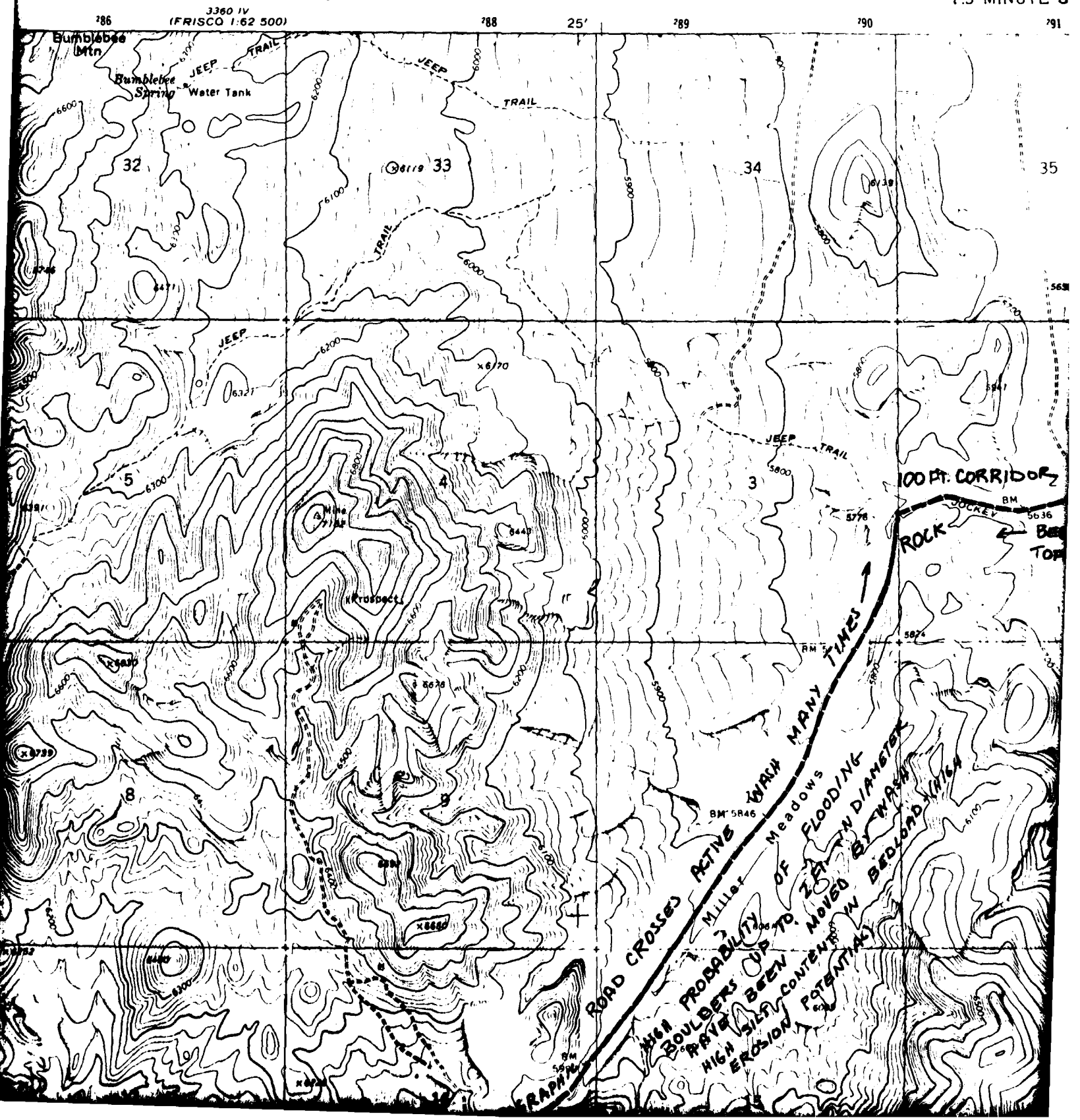
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

BLUE MOUN

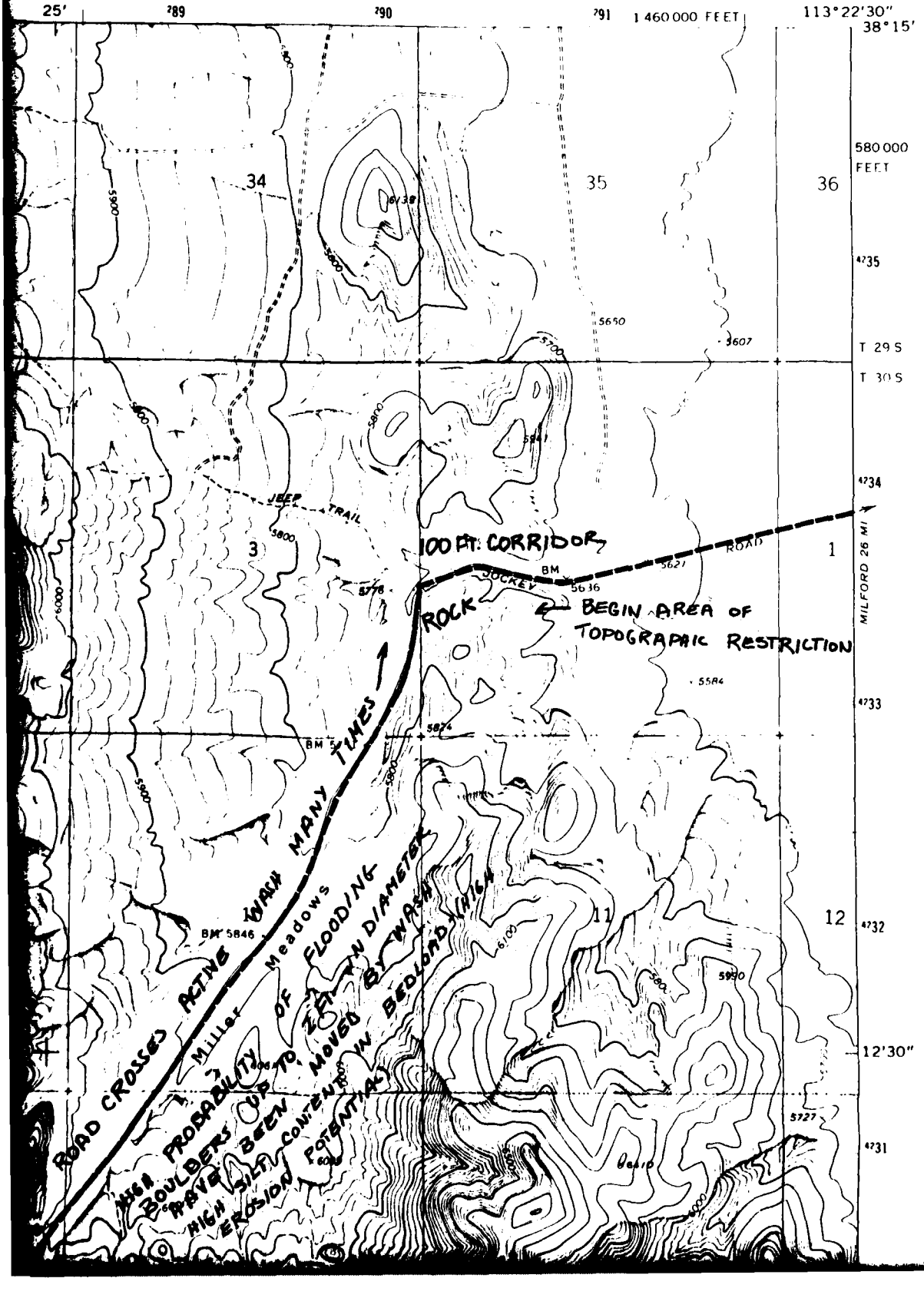
7.5 MINUTE S

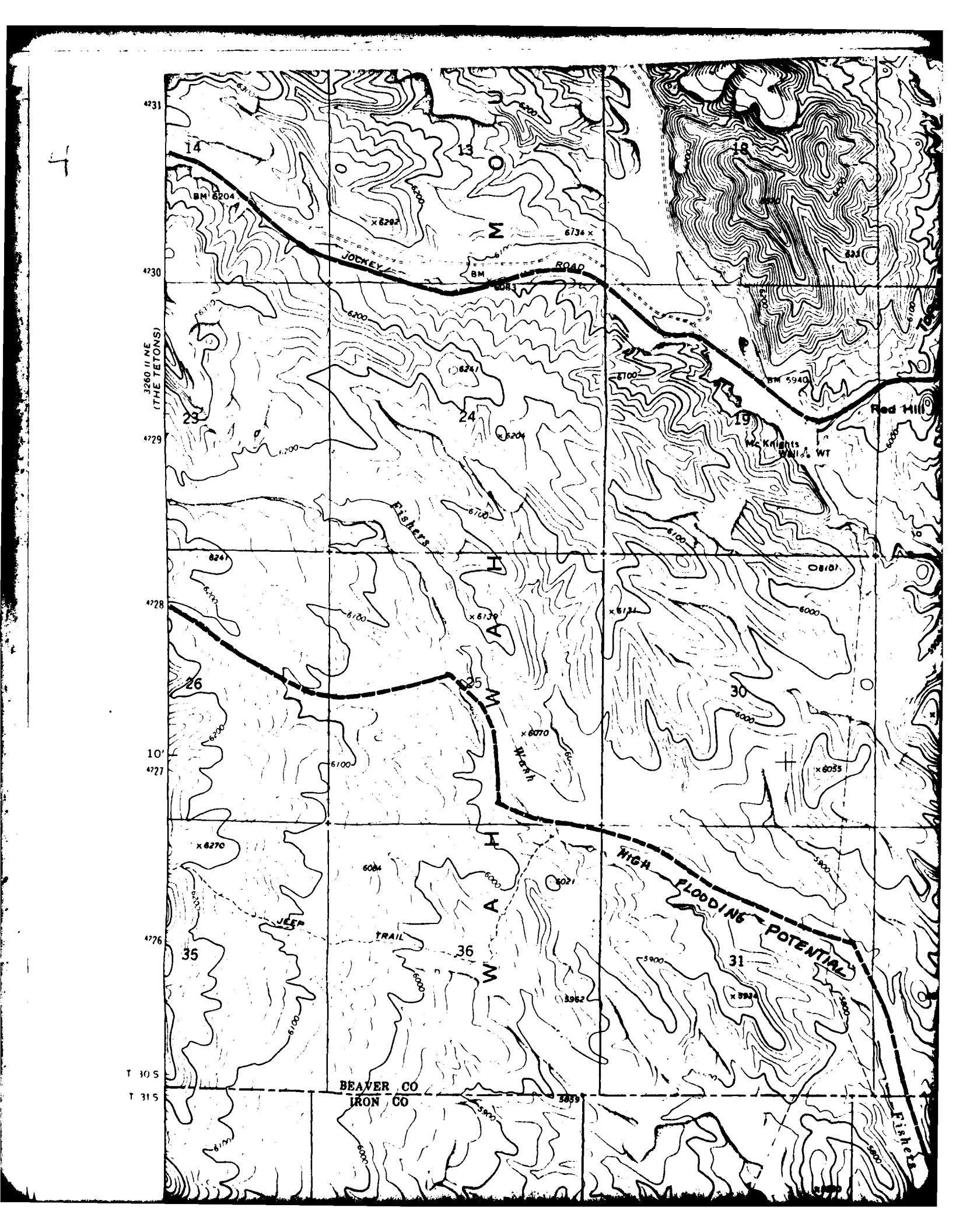


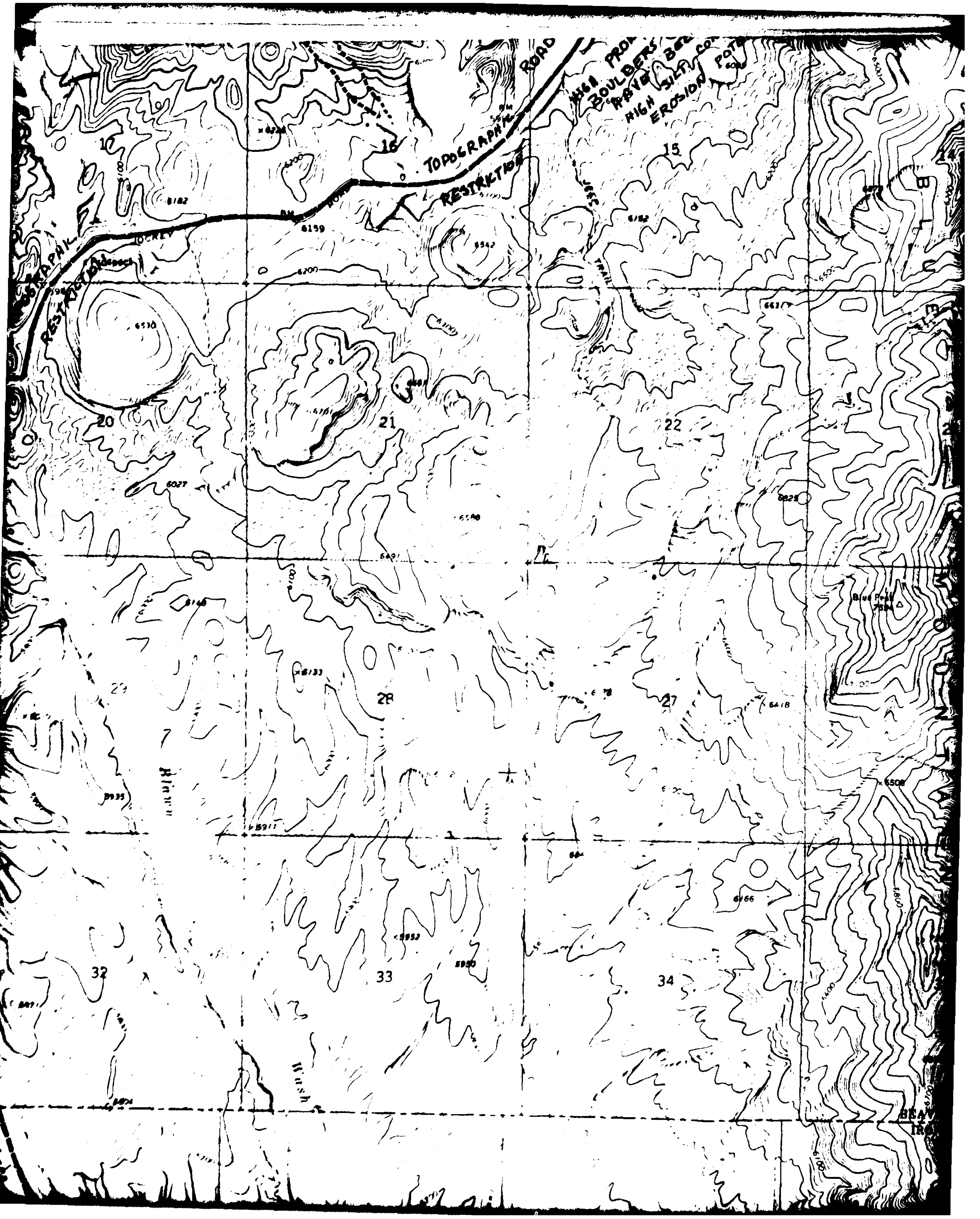
3

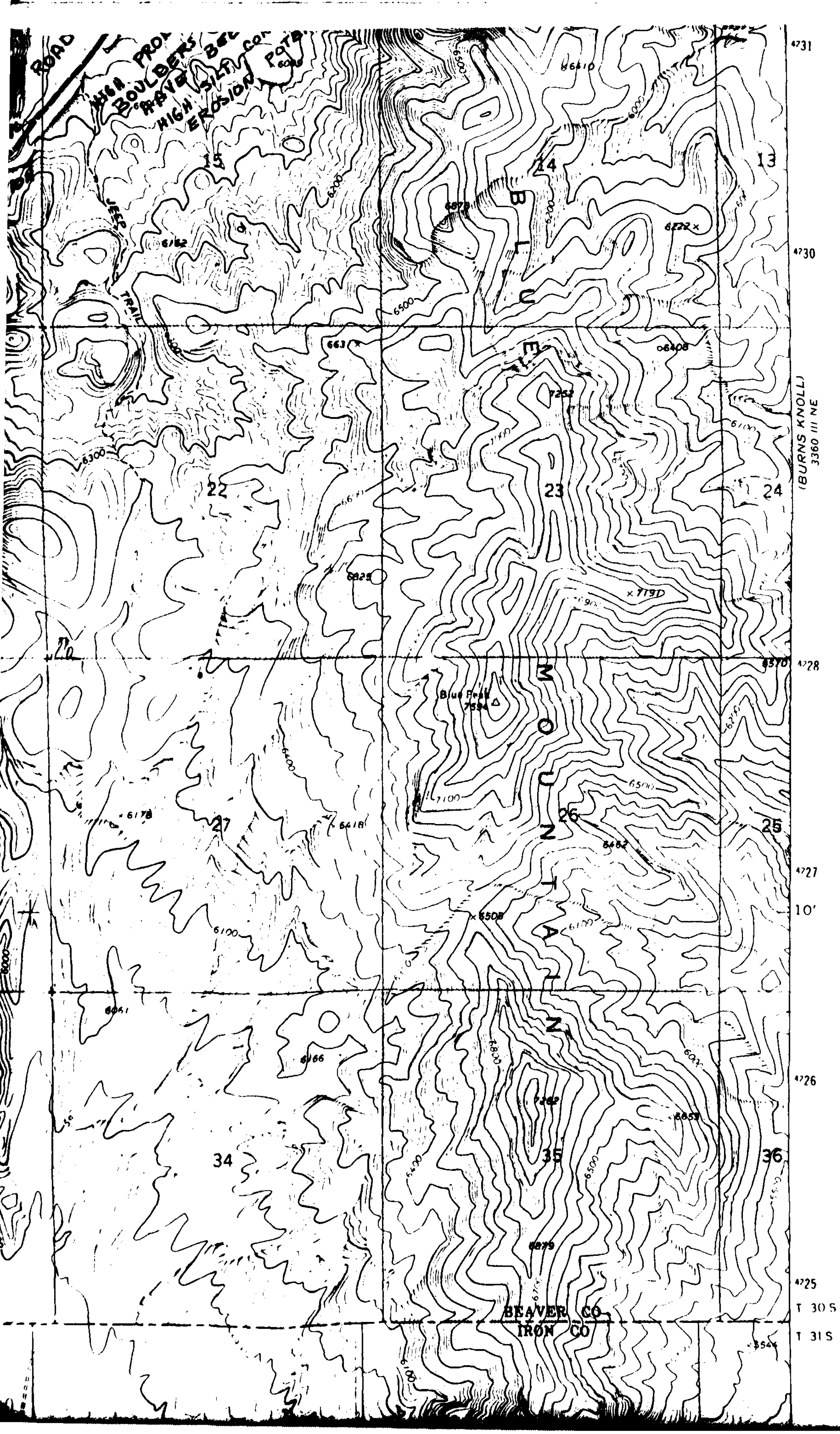
BLUE MOUNTAIN QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)

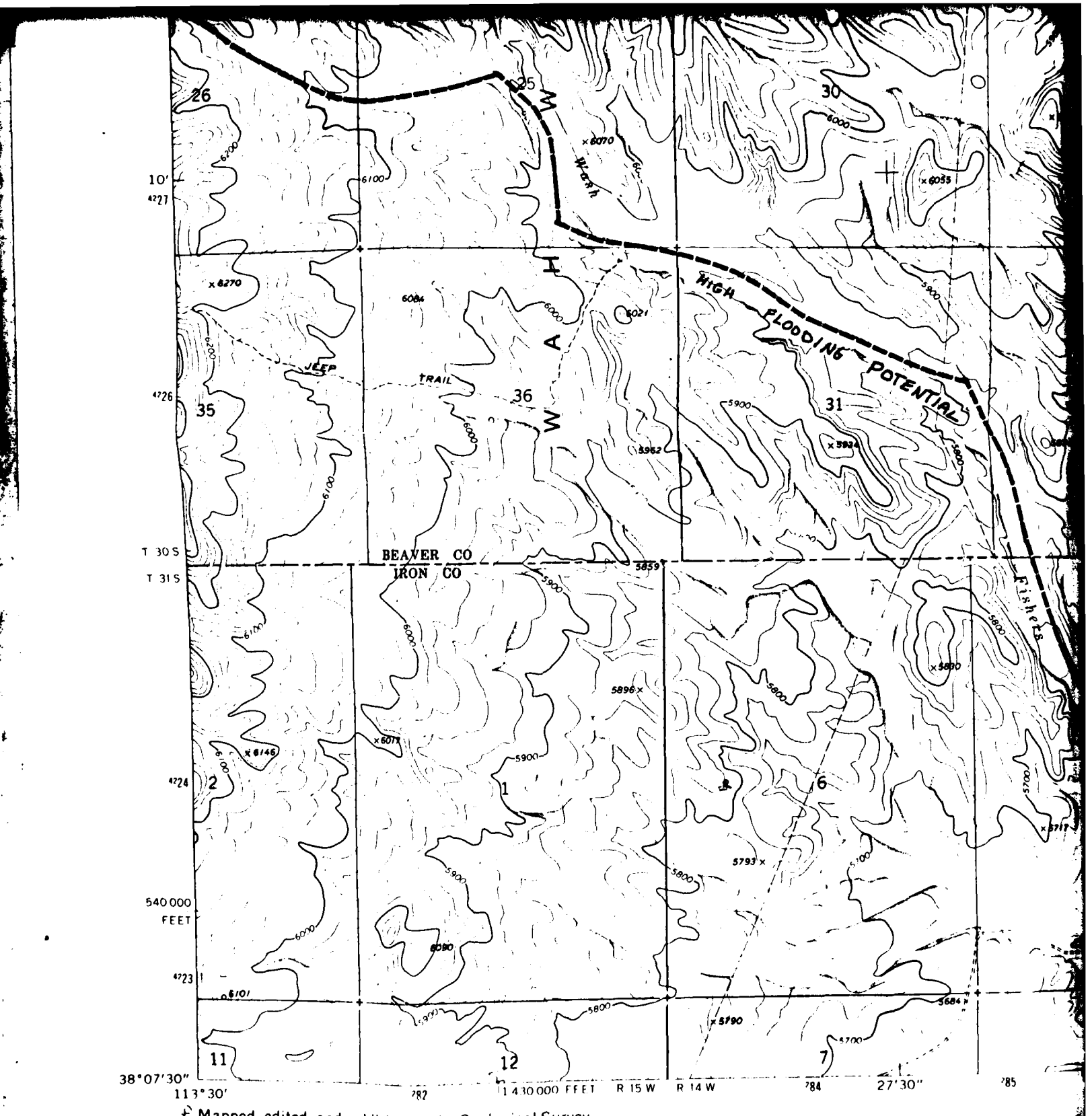
3360 IV
(FRISCO 1,62 500)




4231
4230
4229
4228
4227
4776
T 30 S
T 31 S
14
13
18
23
24
19
26
25
30
35
36
31
JOCKEY
ROAD
BM 6204
BM 6083
BM 5940
Red Hill
McKnights Well & WT
Fishers
Wash
HIGH FLOODING POTENTIAL
JEEP TRAIL
BEAVER CO
IRON CO
3260 II NE
(THE TETONS)
6200
6100
6000
5900
6241
6204
6292
6134
6139
6131
6101
6070
6055
6270
6084
6021
5962
5934
5859


TOPOGRAPHIC
ROAD
RESTRICTION
BOULDERS
HIGH SILT
EROSION
JOCKEY
Prospect
TRAIL
17
16
15
20
21
22
29
28
27
32
33
34
6182
6159
6542
6200
6027
6148
6133
5952
5950
6418
6166
Blue Peak
7594
6508
Wash


ROAD
BOULDERS
HIGH SILT
EROSION
JEEP
TRAIL
BLUE MOUNTAIN
Blue Peak
7594
15
14
13
22
23
24
27
26
25
34
35
36
BEAVER CO
IRON CO
T 30 S
T 31 S
4731
4730
4728
4727
10'
4726
4725
(BURNS KNOLL)
3360 III NE



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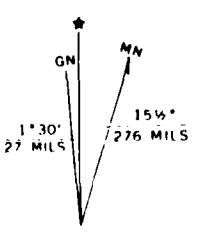
Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1971

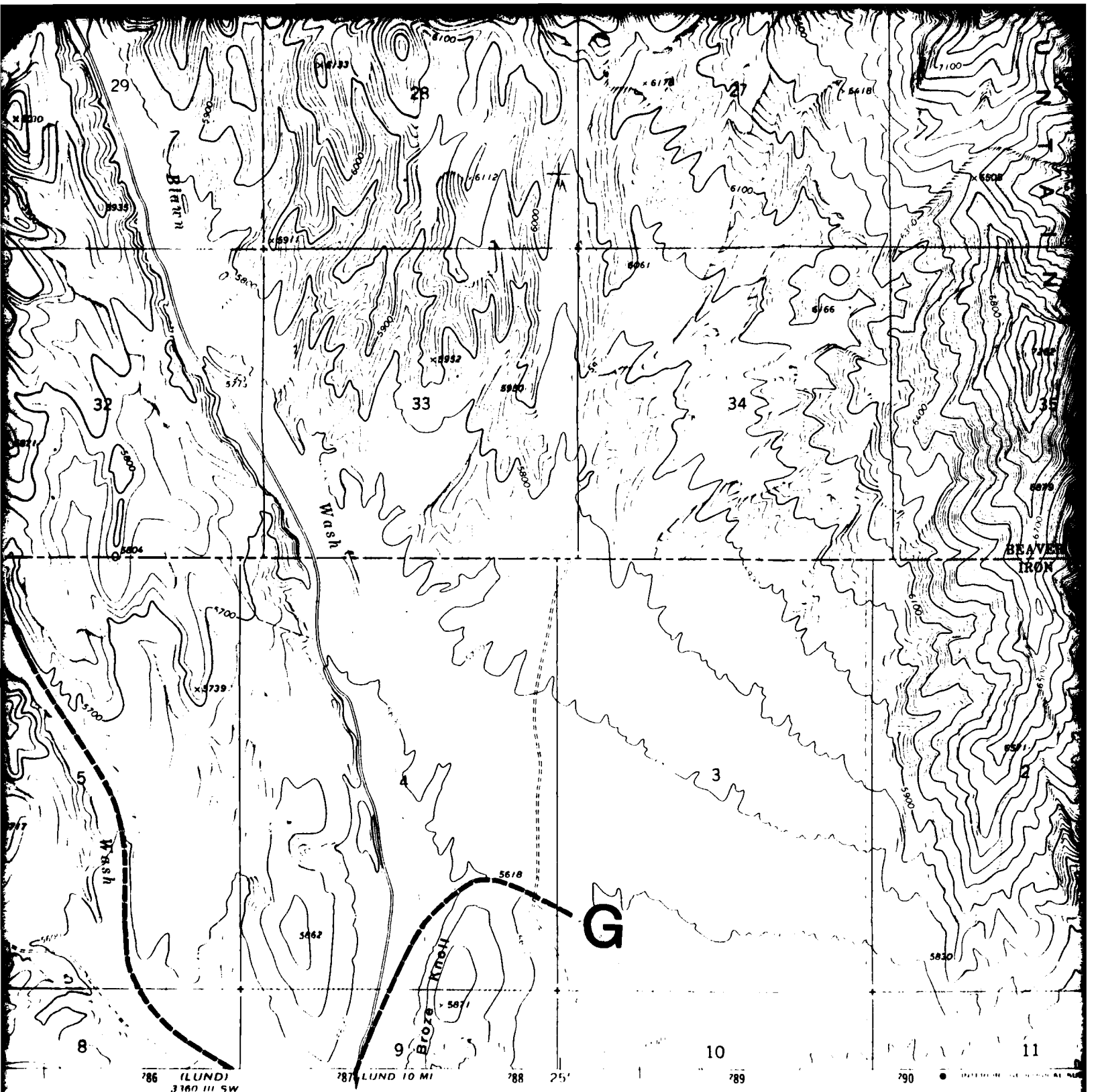
Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

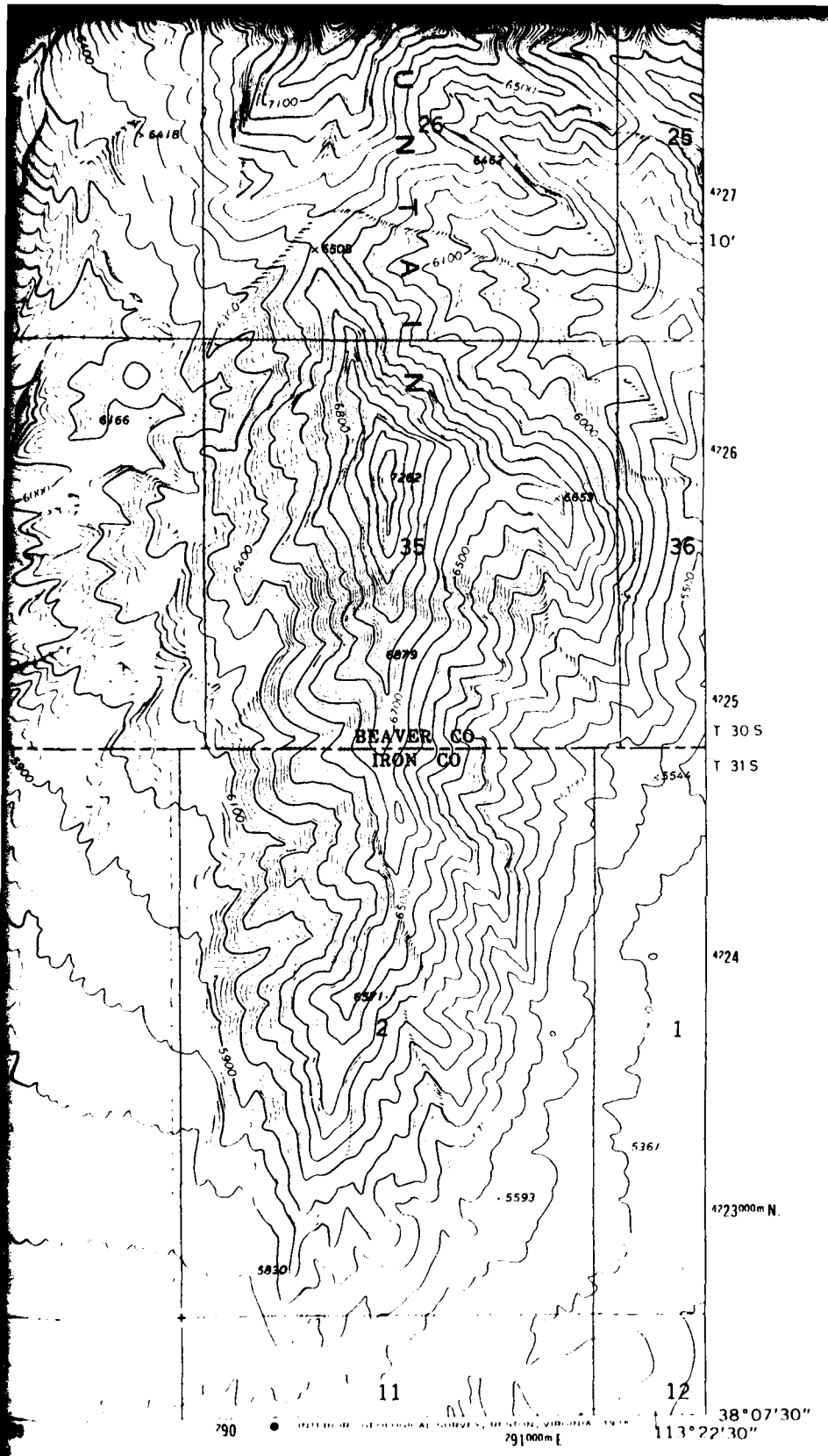


UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS
FOR SALE BY U.S.G
A FOLDER



MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light duty road, hard or improved surface

Unimproved road

( ) Interstate Route ( ) U S Route ◯ State Route

Property of U.S. Air Force

Ertec
The Earth Technology

BLUE MOUNTAIN, UTAH

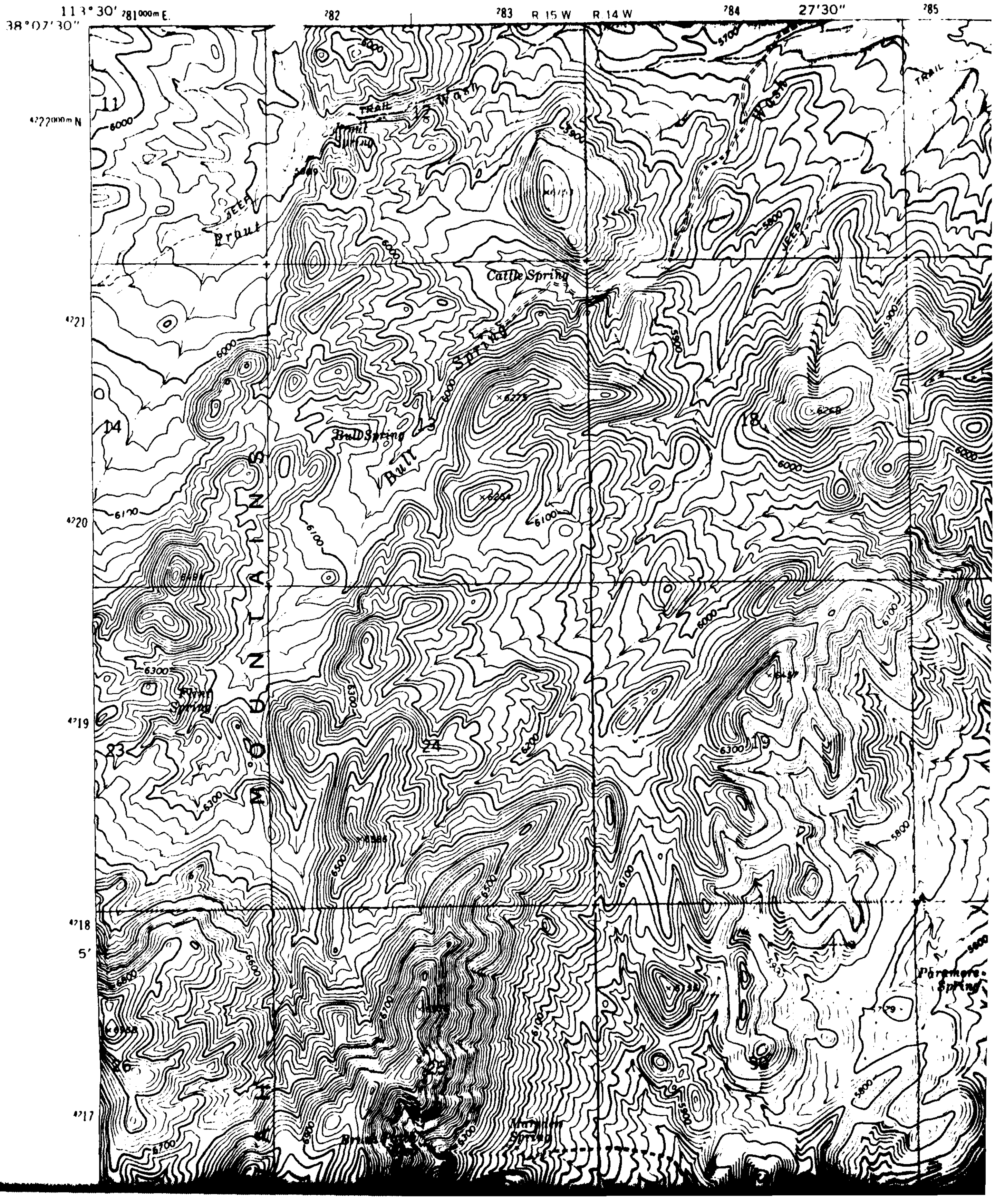
N3807.5–W11322.5/7.5

1971

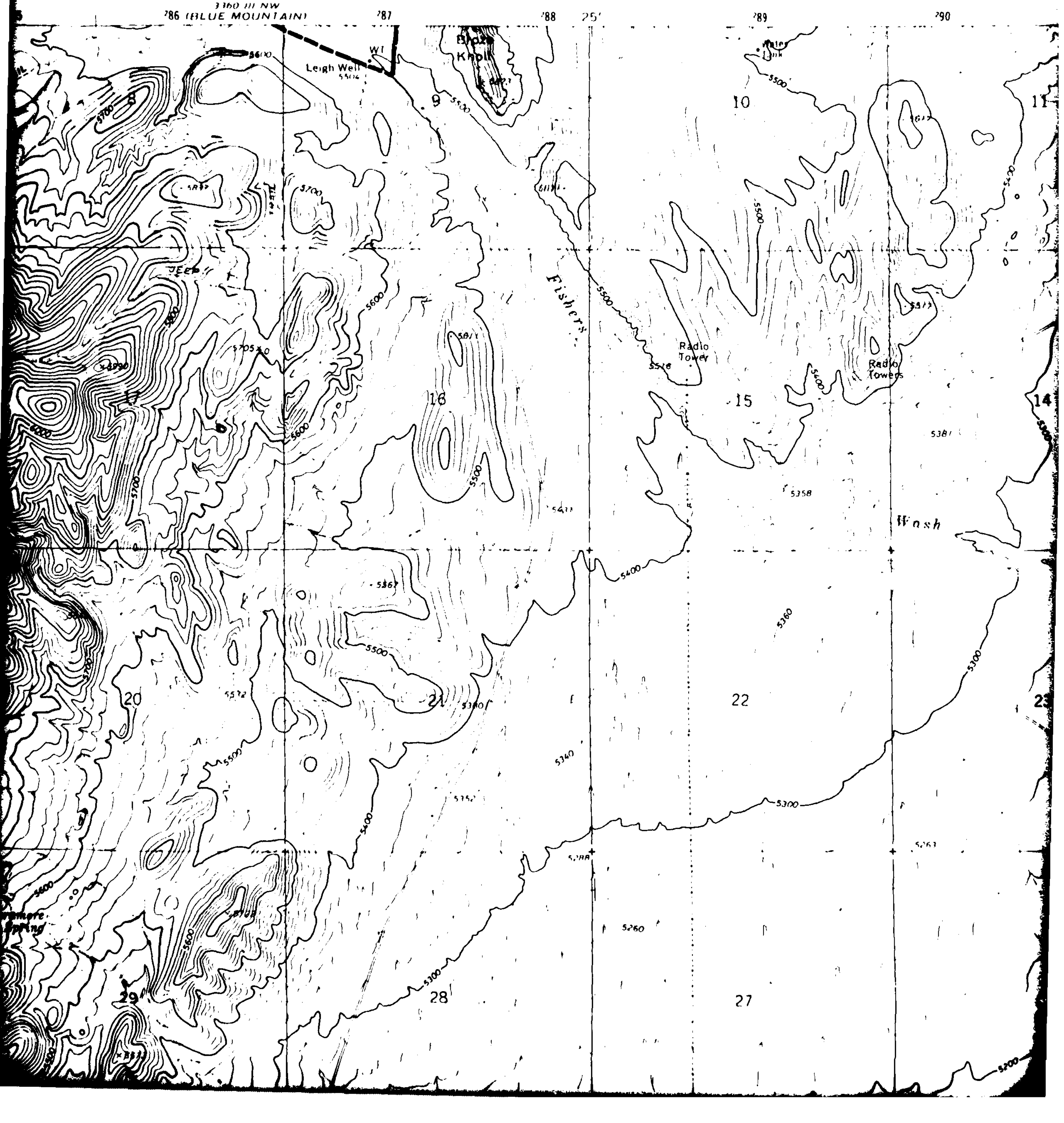
7

3260 II NE
(THE TETONS)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



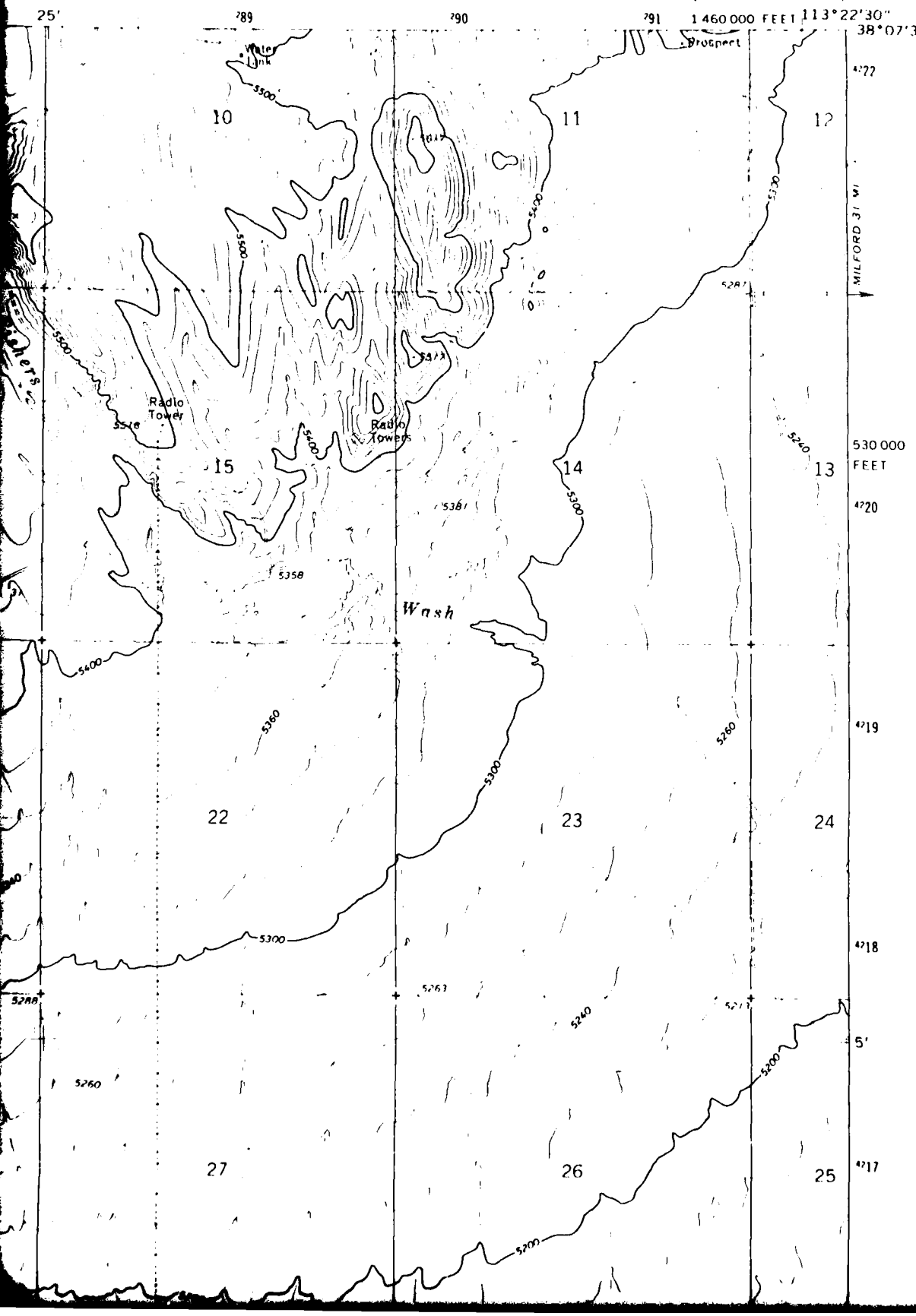
DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

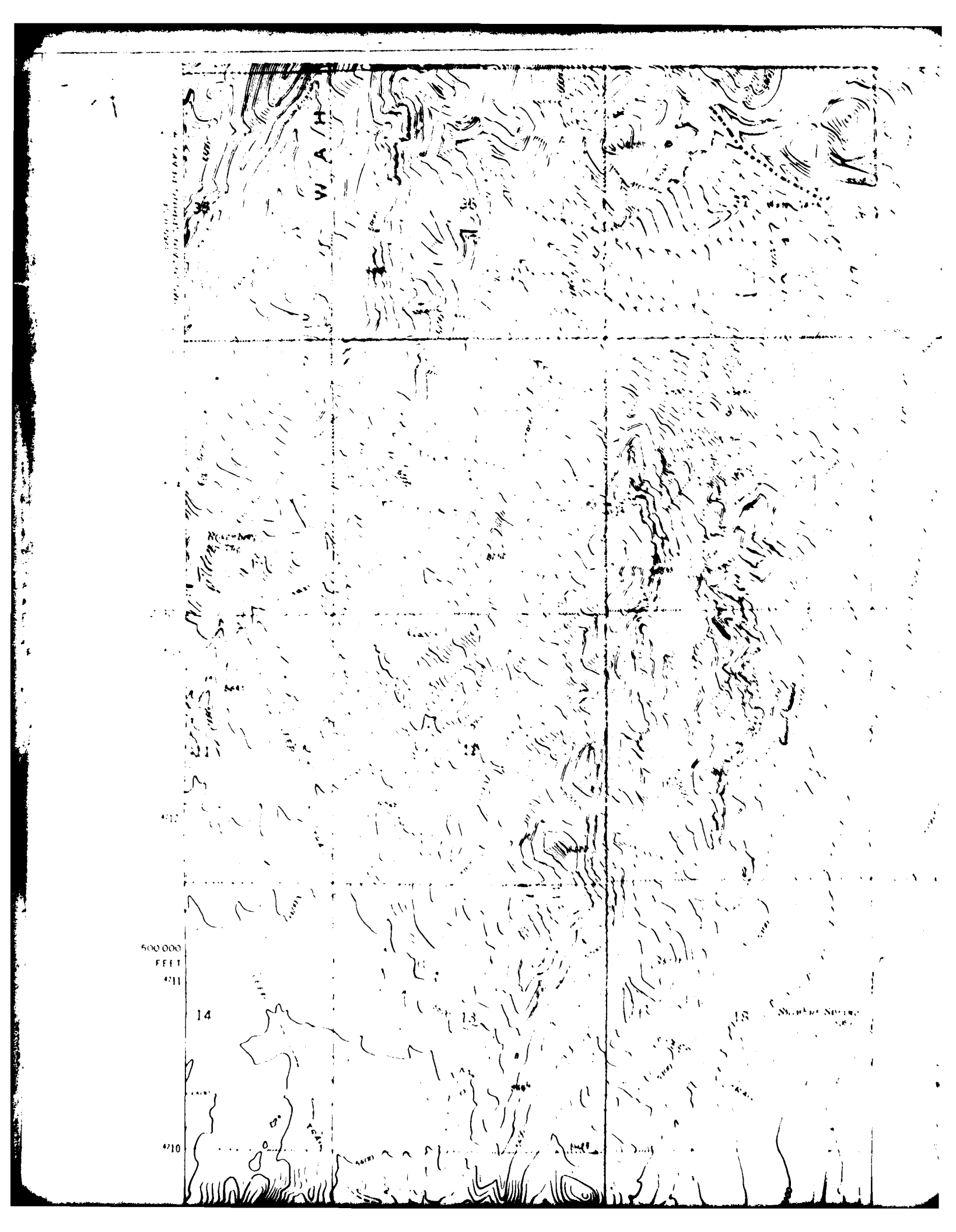


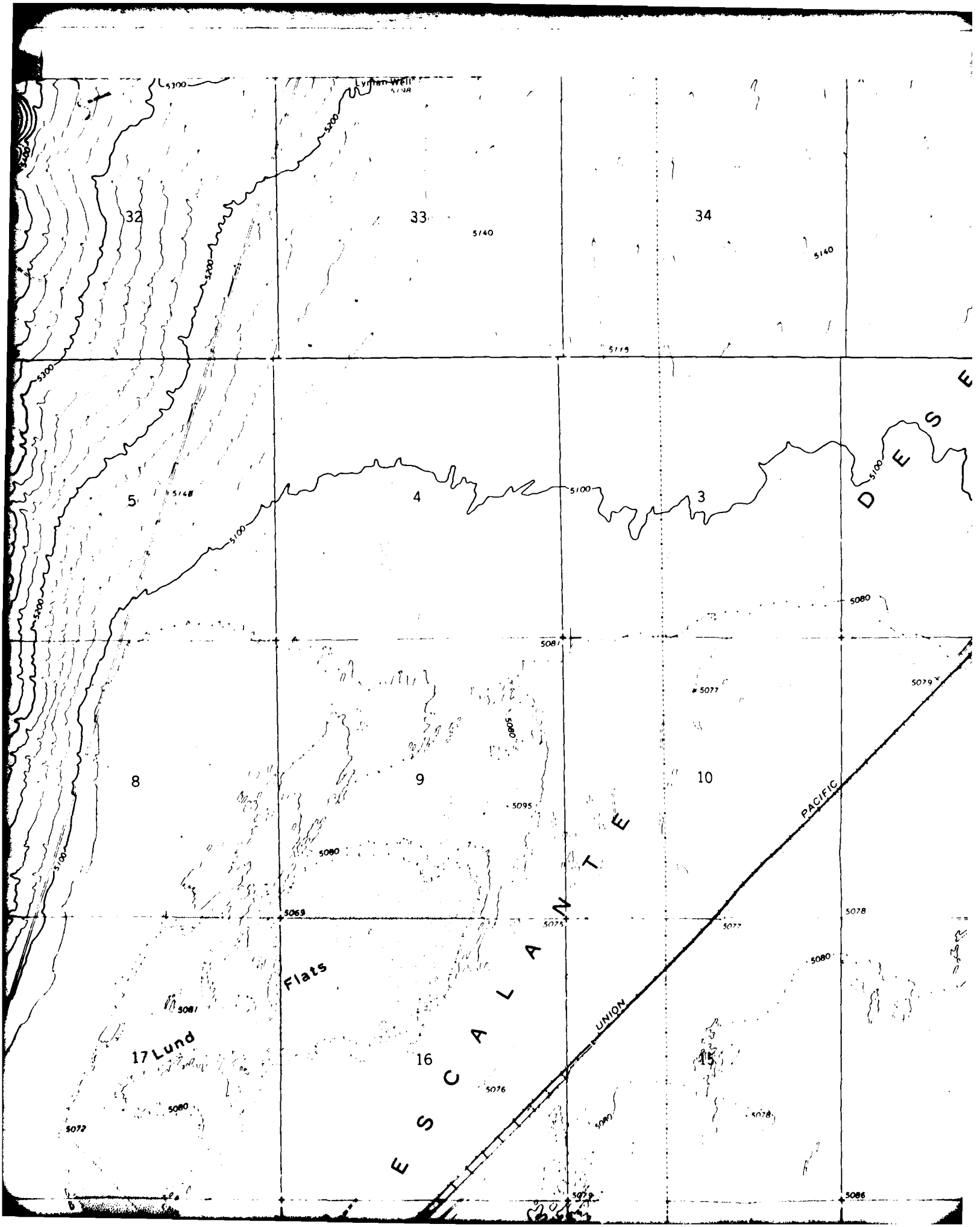
LUND QUADRANGLE

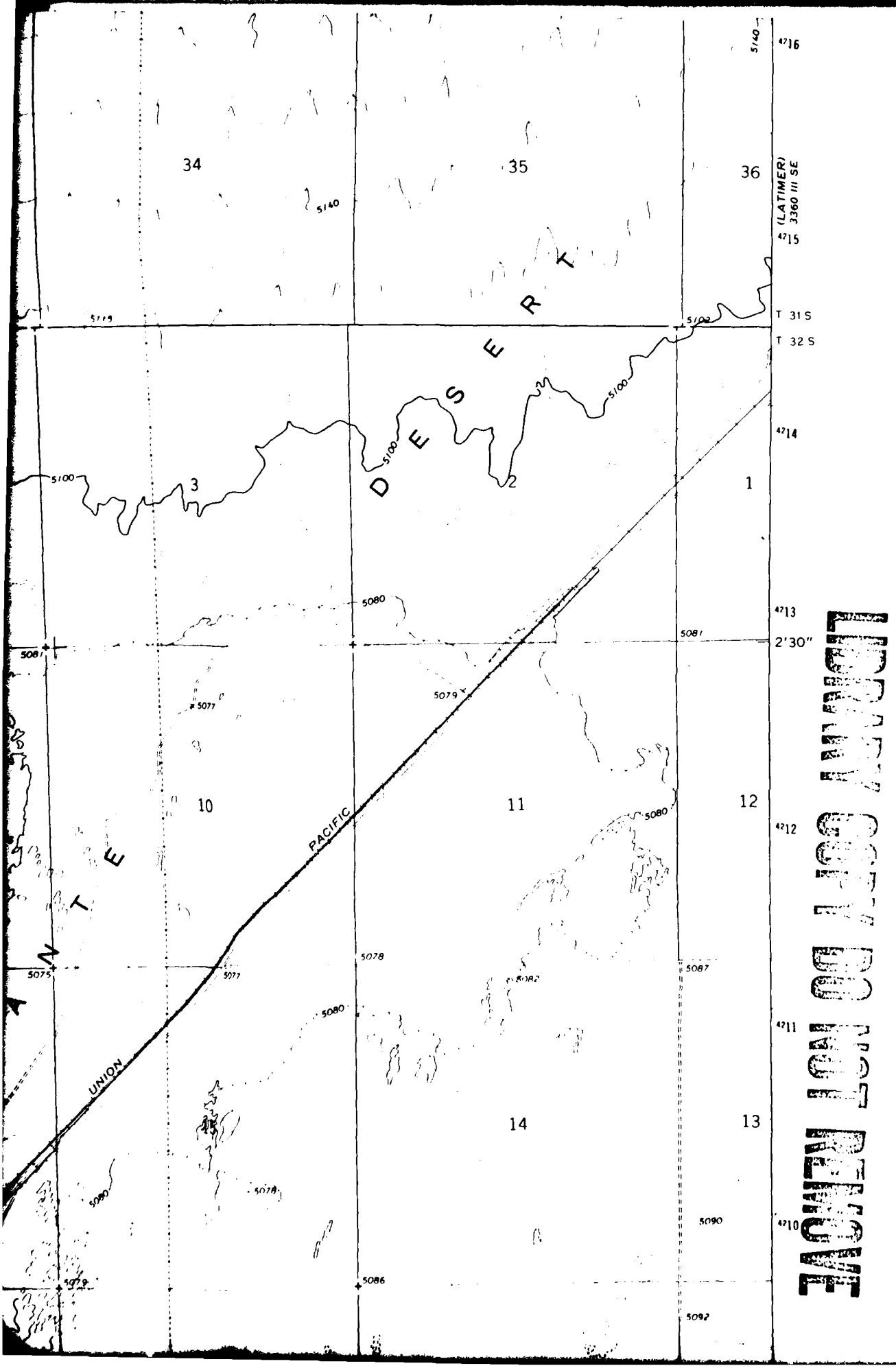
UTAH—IRON CO.

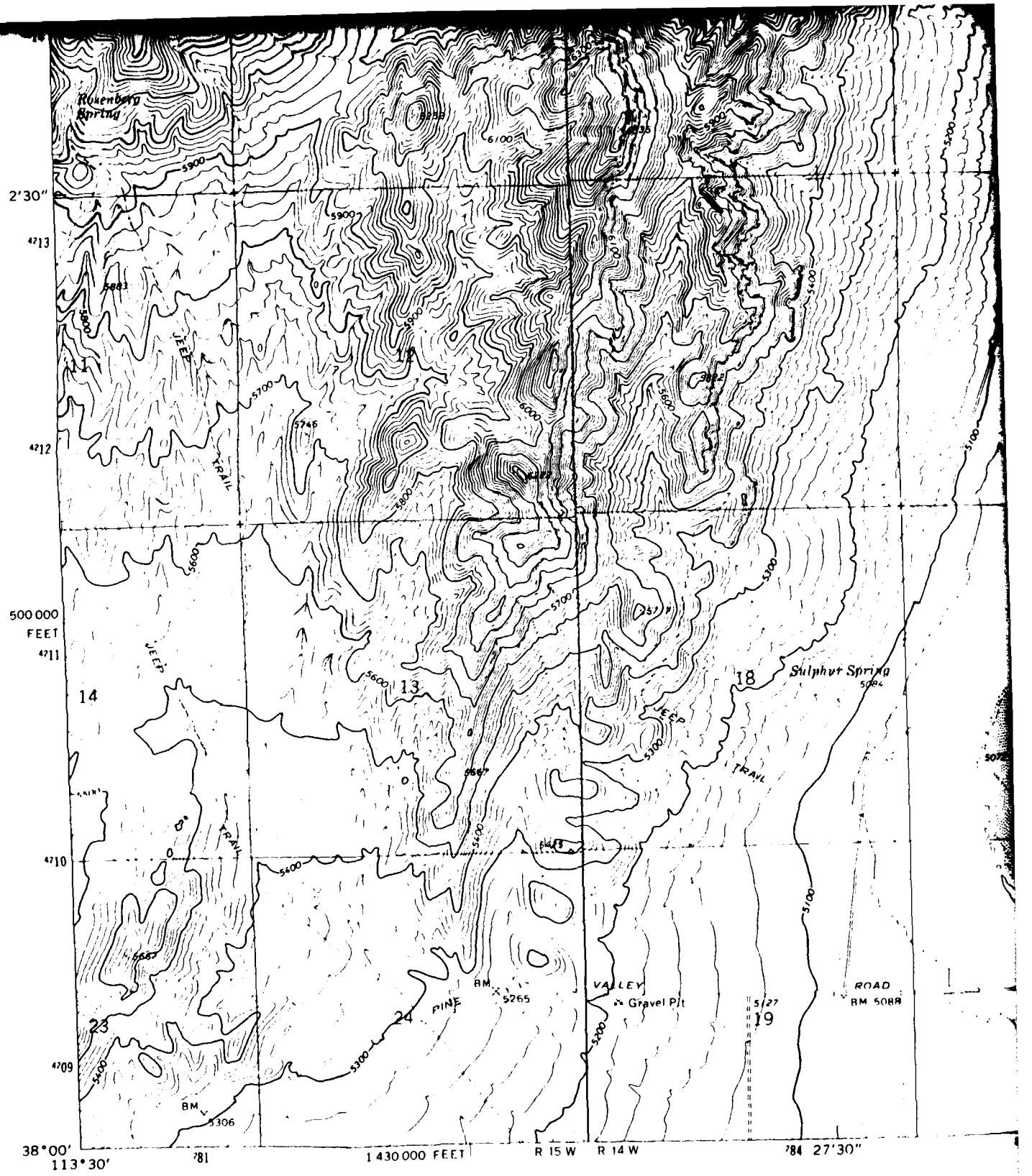
7.5 MINUTE SERIES (TOPOGRAPHIC)




500 000
FEET
4711
4710
14
13
15


Lyman Well
5198
32
33
34
5140
5140
5115
5300
5200
5100
5148
5
4
3
DESE
5080
5081
5077
5079
8
9
10
5095
5080
5069
5075
5077
5078
5080
Flats
5081
17 Lund
16
15
5076
5080
5078
5072
5080
ESCALANTE
PACIFIC
UNION
5079
5086


34
35
36
3
2
1
10
11
12
14
13
DESERT
PACIFIC
UNION
(LATIMER) 3360 III SE
T 31 S
T 32 S
4216
4215
4214
4213
4212
4211
4210
2'30"
5140
5100
5080
5081
5079
5077
5078
5075
5087
5090
5086
5092



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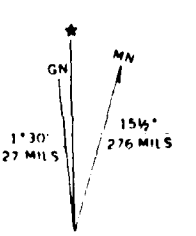
Control by USGS and USC&GS

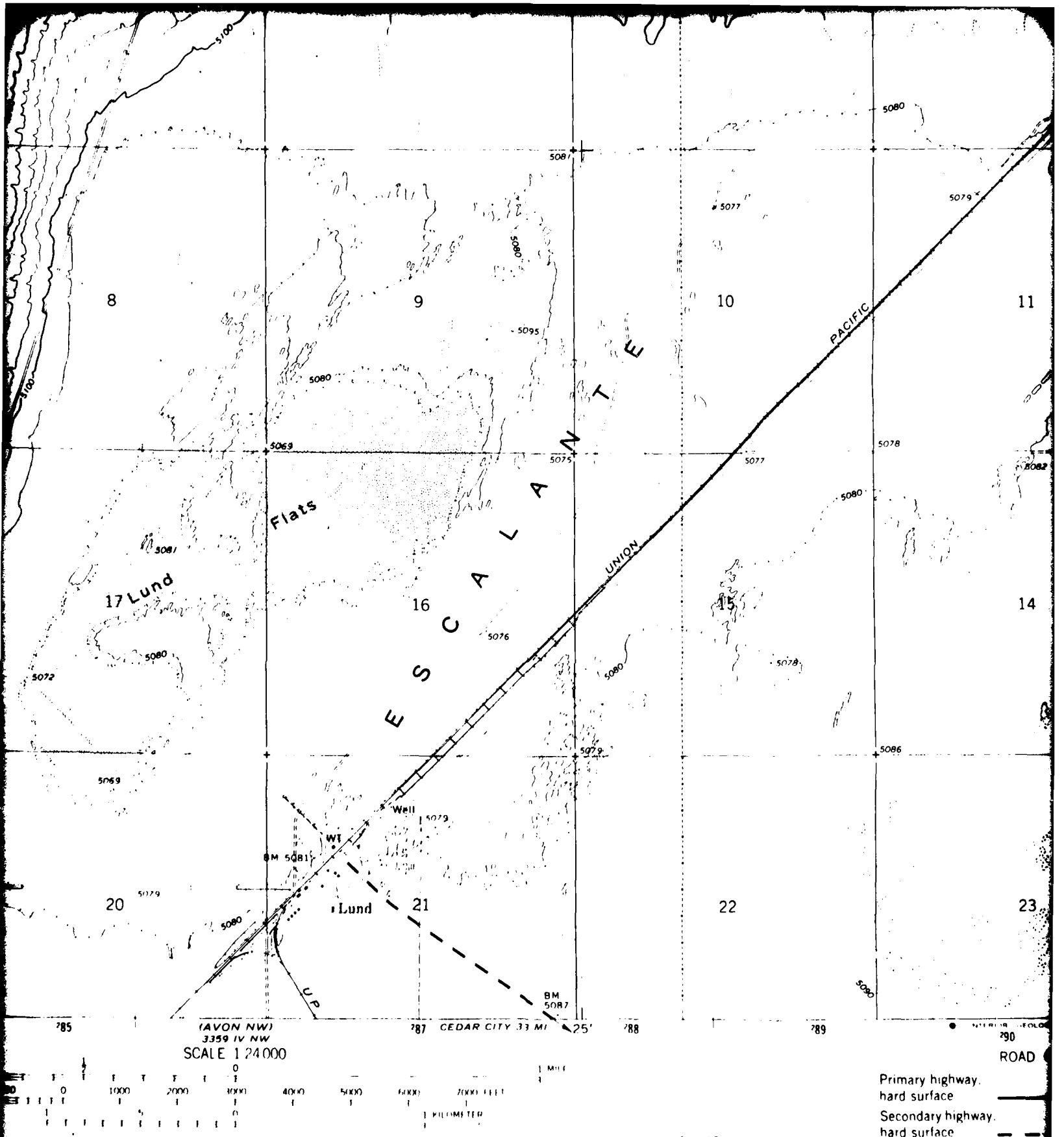
Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1971

Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines



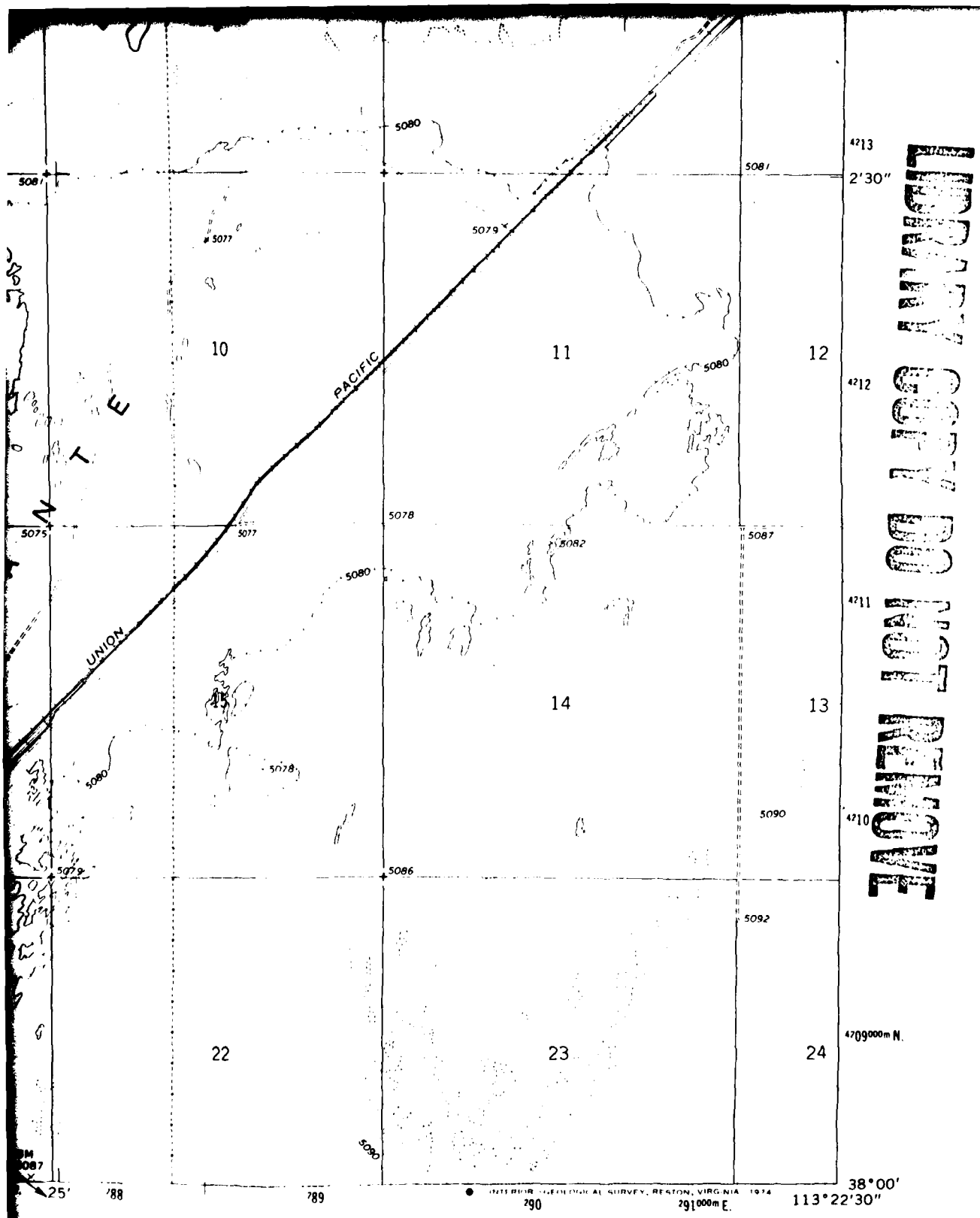
UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec
The Earth Technology Corporation



ROAD CLASSIFICATION

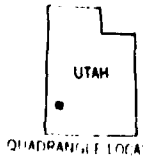
Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

( ) Interstate Route ( ) U S Route ( ) State Route



QUADRANGLE LOCATION

Ertec
The Earth Technology Corporation

Property of U.S. Air Force

LUND, UTAH

N3800—W11322.5/7.5

1971

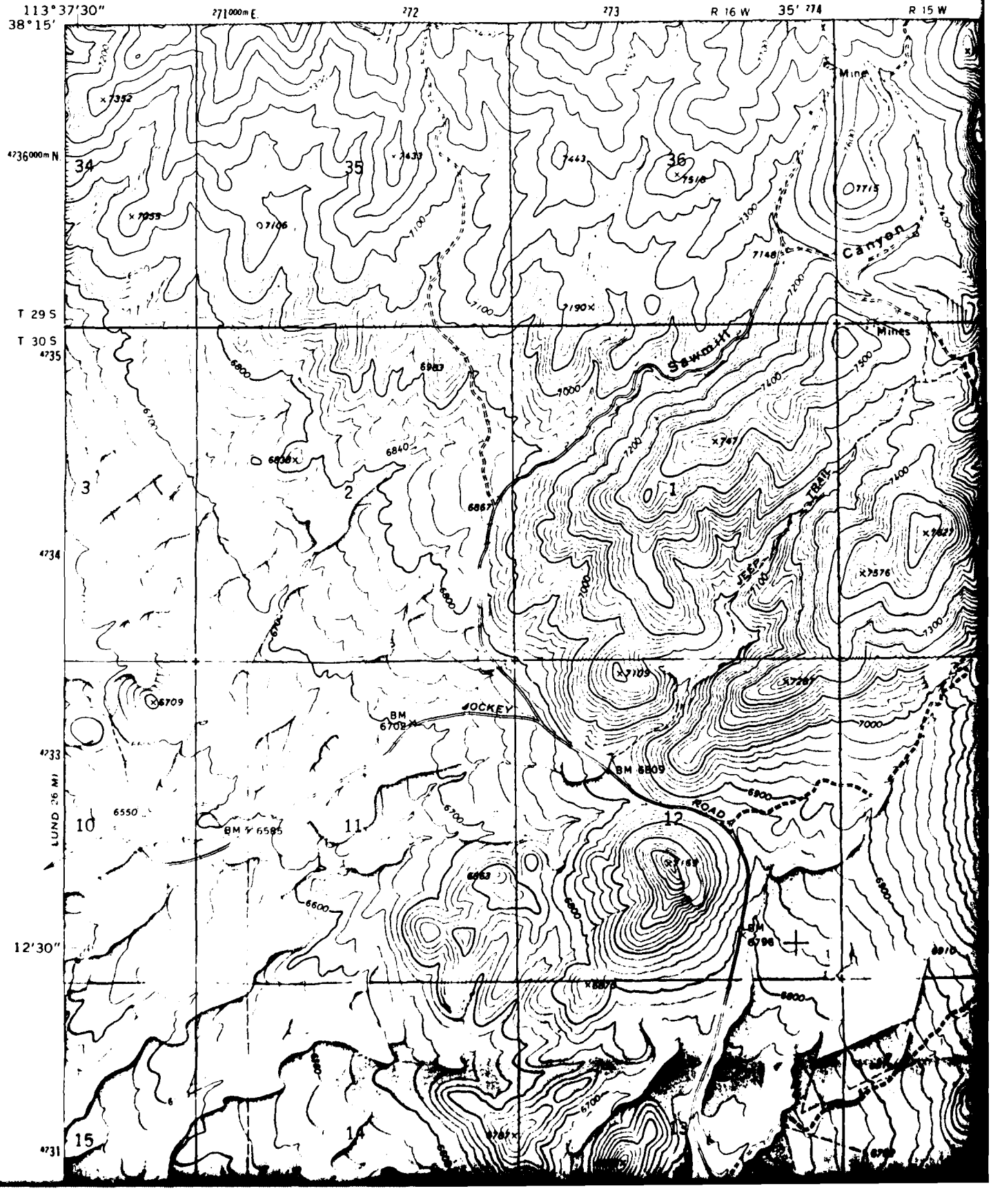
AMS 3360 III SW—SERIES V897

(AVON) 3359 IV NE

4

3240' SW
NE GROVE RESERVOIR)

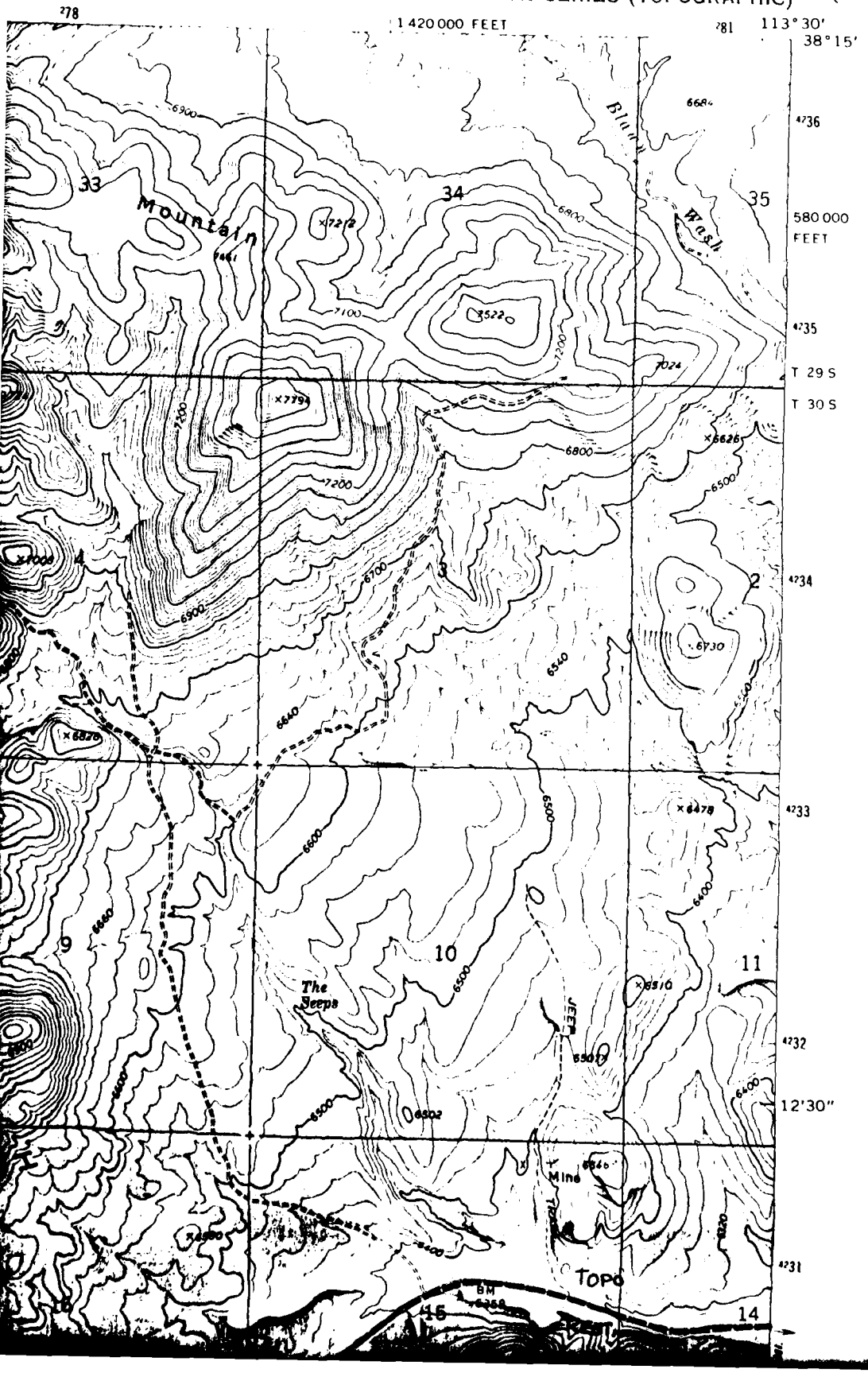
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

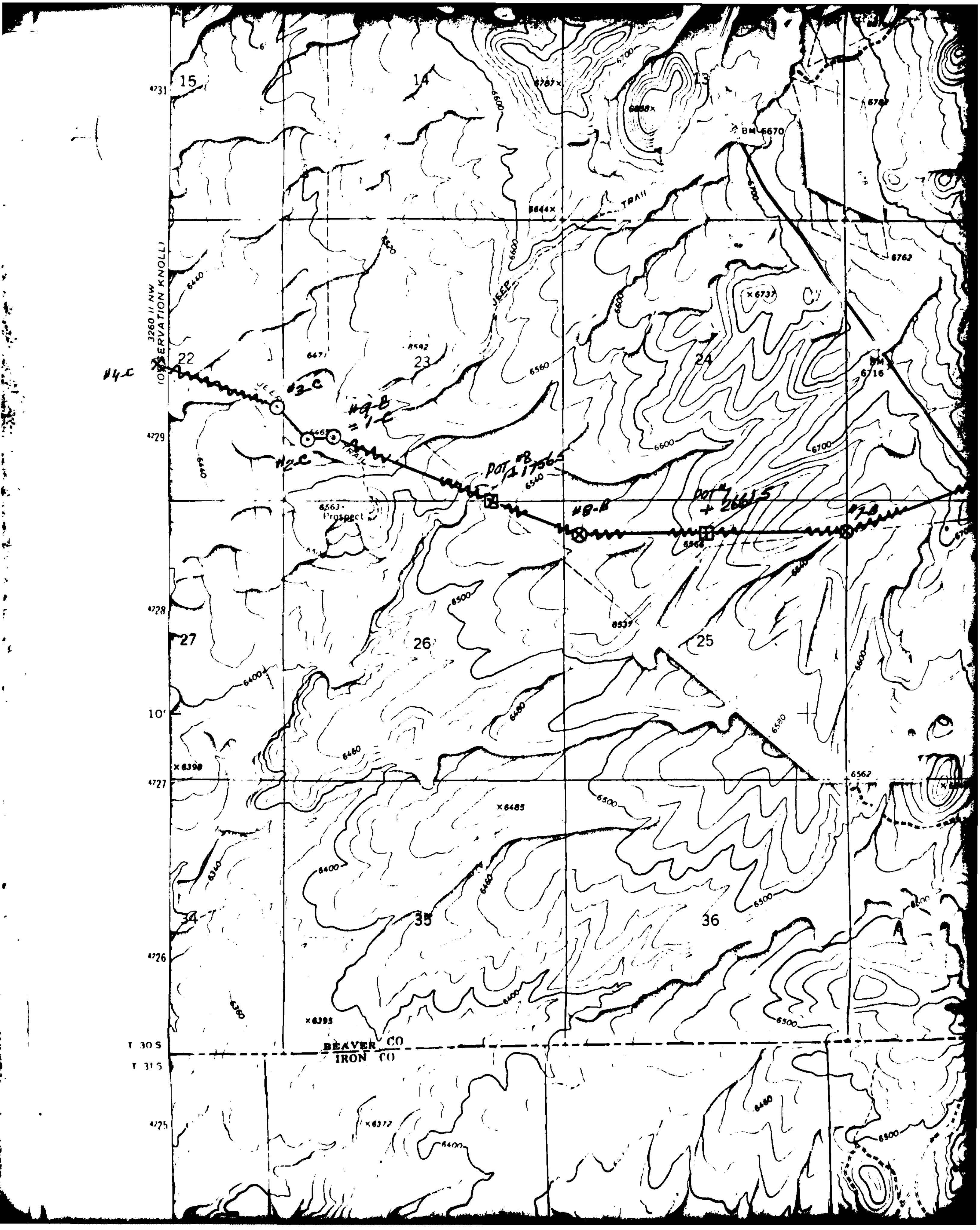


DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

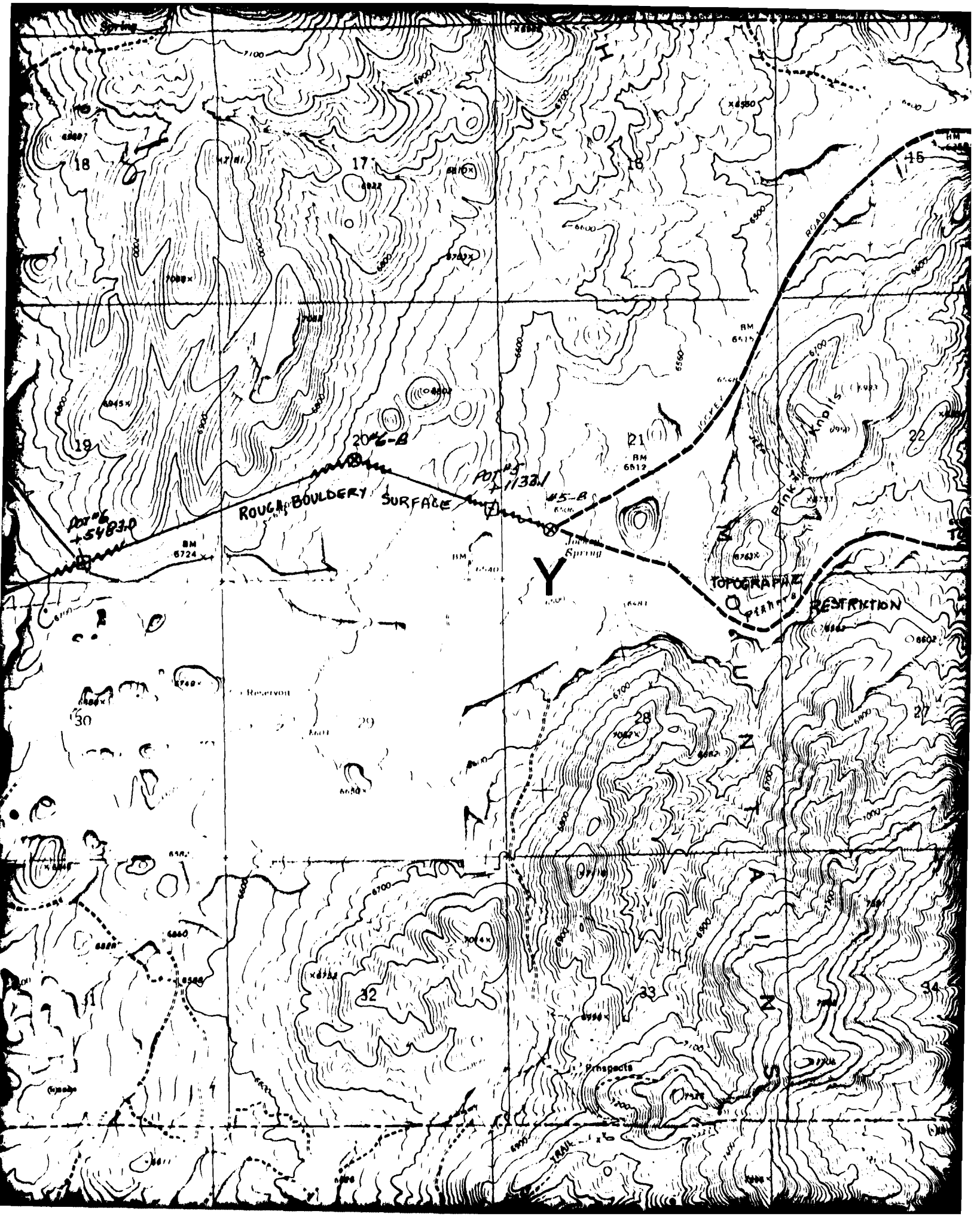
THE TETONS QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)

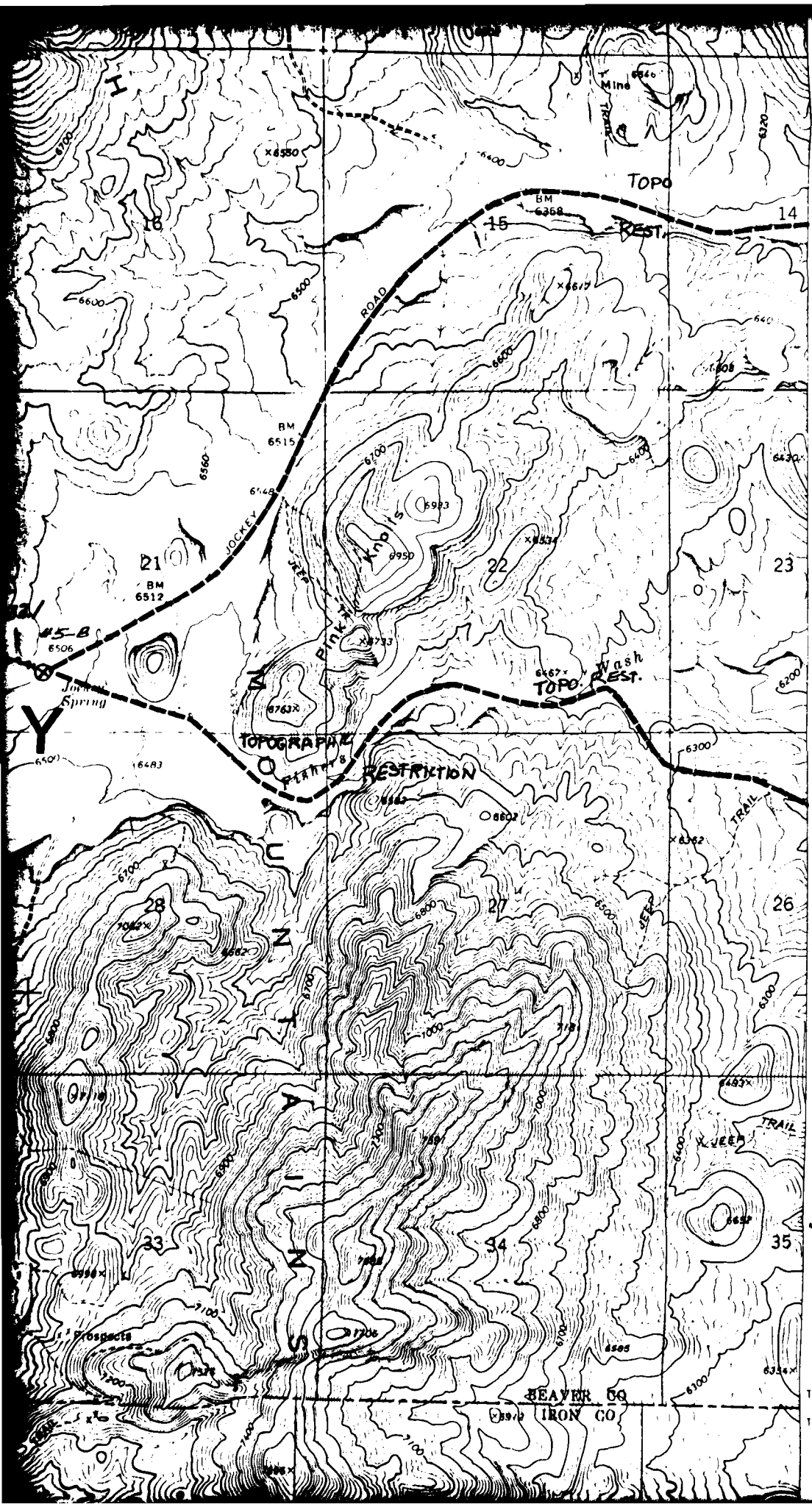
3360 IV
(FRISCO 1 62 500)

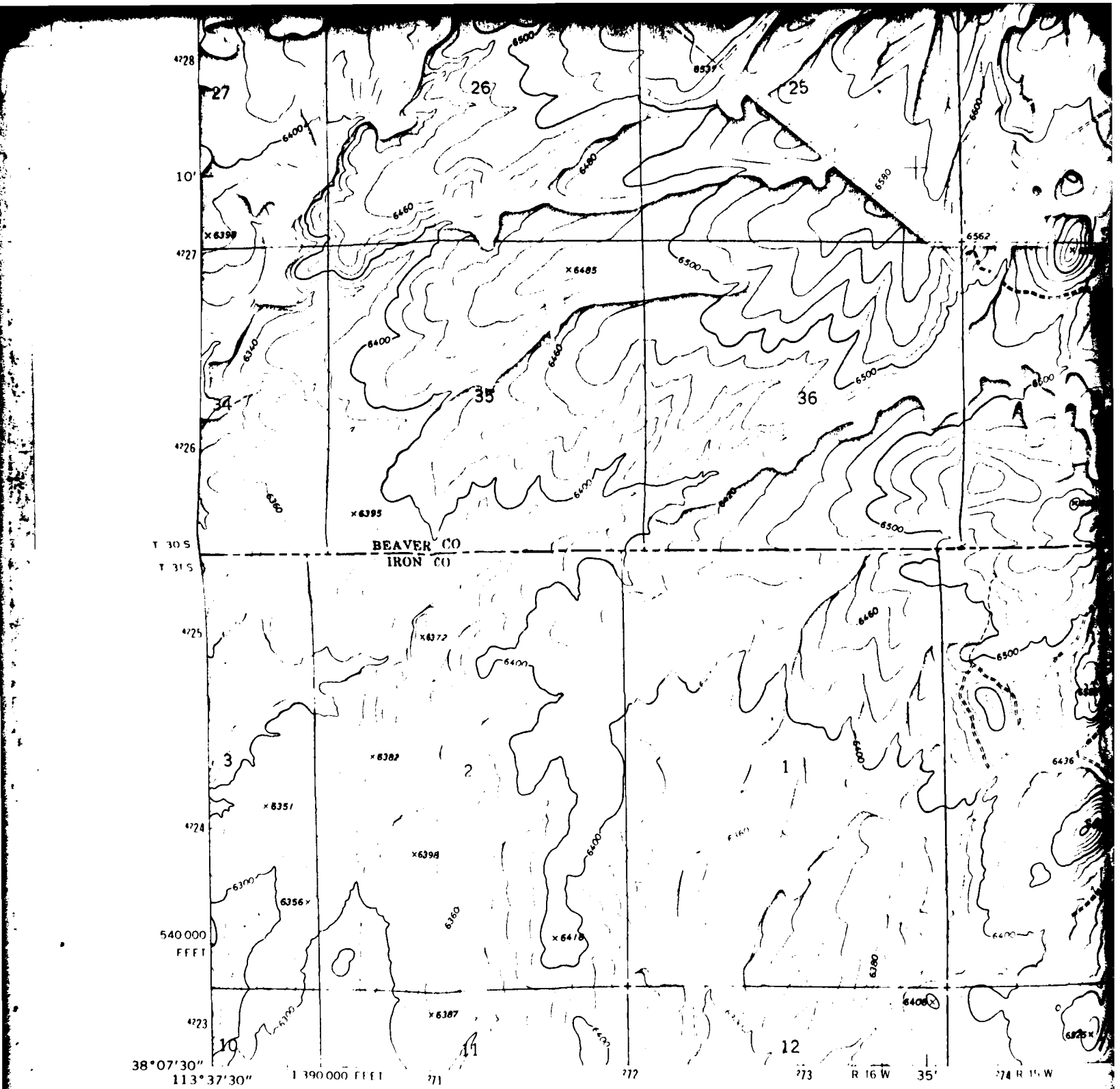




15
14
13
22
23
24
27
26
25
34
35
36
3260 II NW (OBSERVATION KNOLL)
BM 6670
TRAIL
JEEP
Prospect
6563
6485
6398
6395
6372
6737
6762
6716
6562
6400
6500
6600
6700
10'
4731
4729
4728
4727
4726
4725
T 30 S
T 31 S
BEAVER CO
IRON CO
#4C
#3-C
#2-C
#9-B =1-C
POT #8 1756.5
#8-B
POT #4 2661.5
#7-B


ROUGH BOULDERY SURFACE
TOPOGRAPHIC RESTRICTION
Spring
Reservoir
Prospects
RM 6724
RM 6812
RM 6515
Pink Tank
Knolls
ROAD
18
17
16
15
19
20
21
22
28
27
30
29
32
33
34
31


TOPO
REST.
ROAD
JOCKEY
Pink Knolls
Jones Spring
TOPOGRAPHIC
RESTRICTION
Wash
TOPO. REST.
TRAIL
JEEP
Prospects
BEAVER CO
IRON CO
THERMO 22 MI
(BLUE MOUNTAIN)
3360 III NW
BM 6515
BM 6512
BM 6358
15-B
10'



(BIBLE SPRING)
3260 II SW

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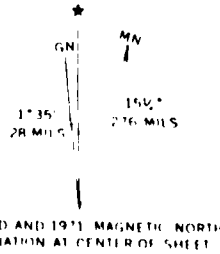
Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1971

Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

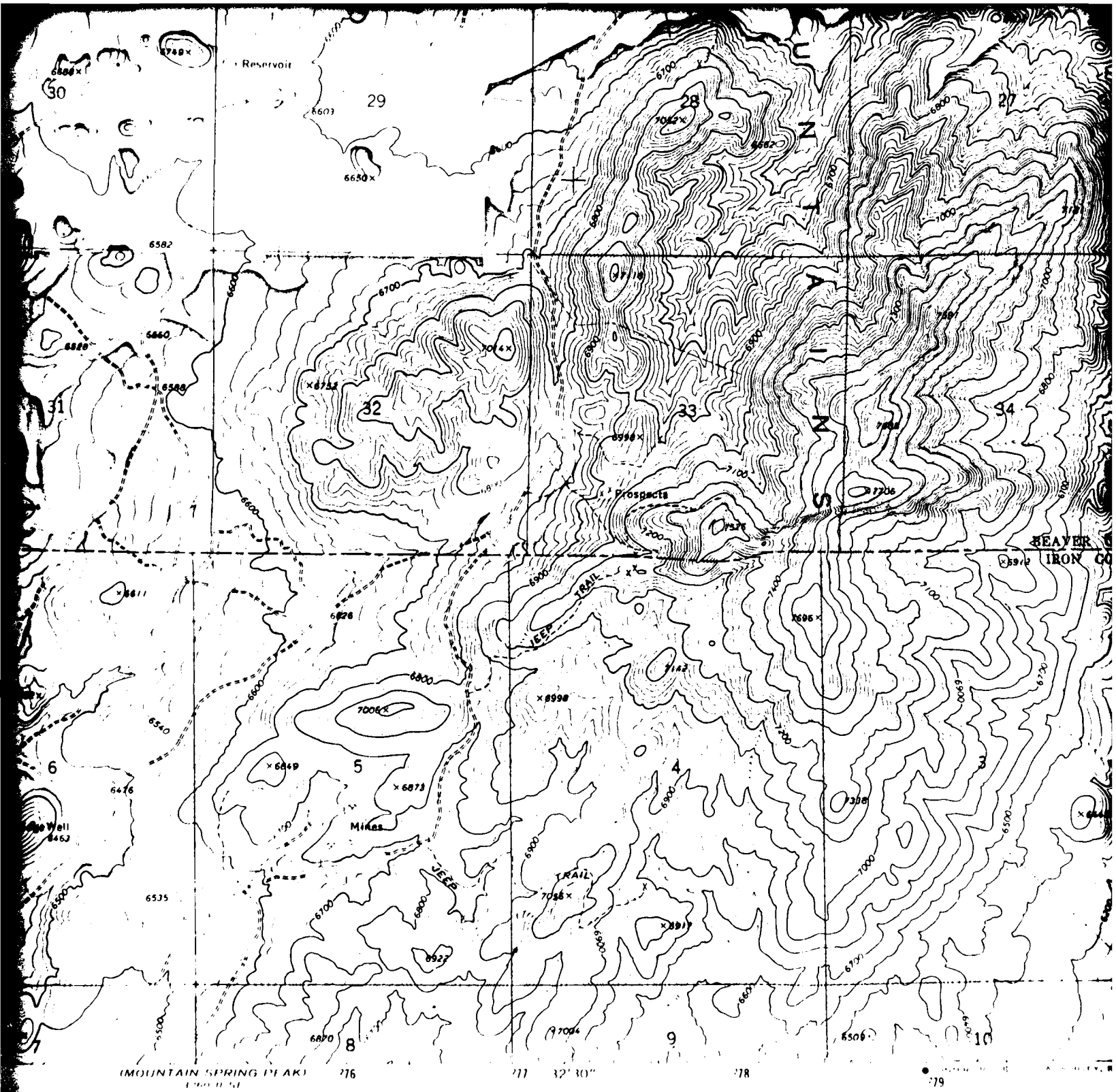
Fine red dashed lines indicate selected fence lines



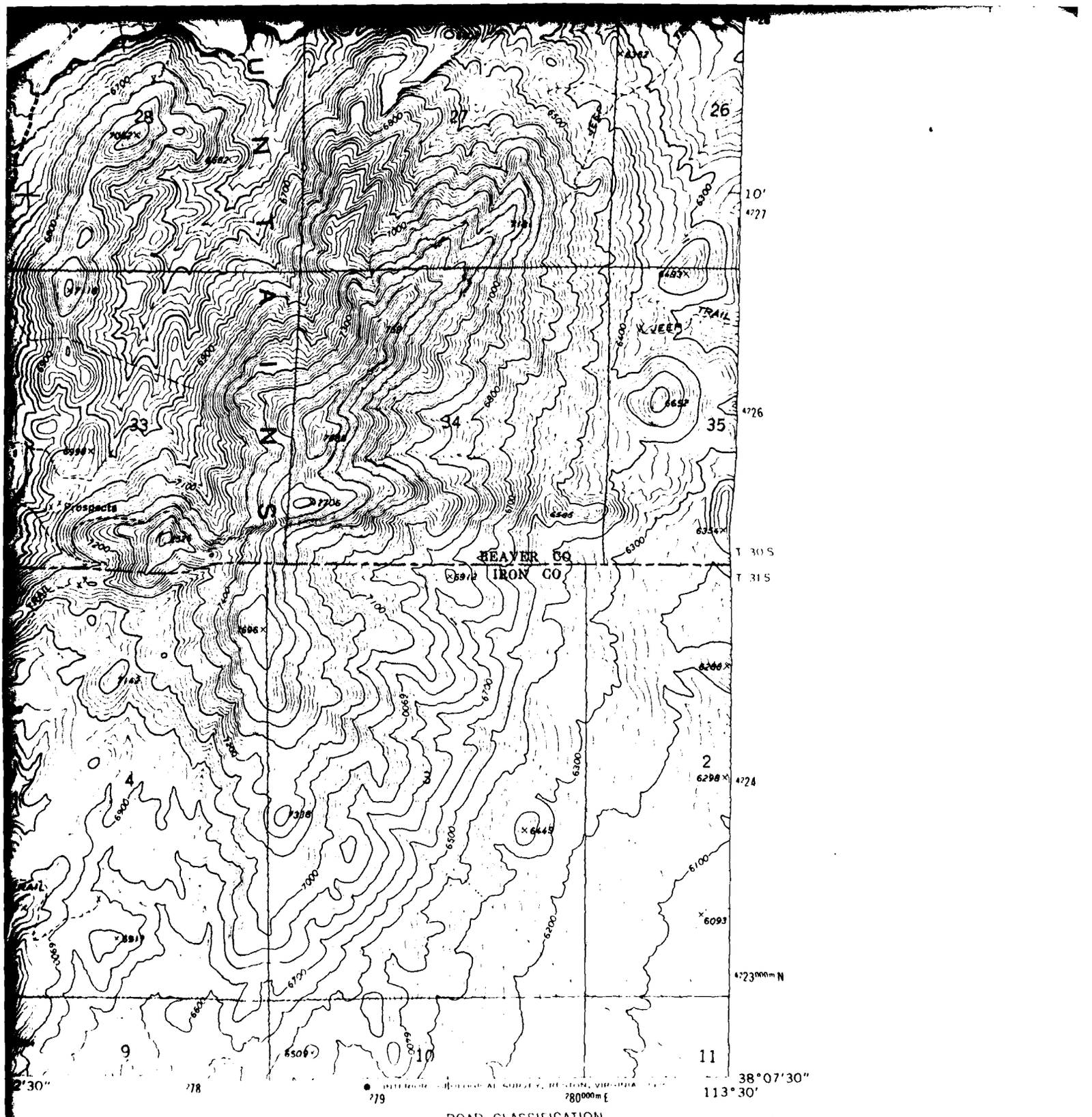
UTM GRID AND 1971 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

THIS
FOR SALE BY U.S.G
A FOLDER D

7



MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light duty road, hard or improved surface

Unimproved road

( ) Interstate Route ( ) U. S. Route ( ) State Route

(LUND) 3760 III SW

⊙ Set @ predetermined coordinate

⊗ Set @ different coordinate

Set BOT

Line Flagged

UTAH

LOCATION

Ertec

the Earth Technology Corporation

Property of U.S. Air Force

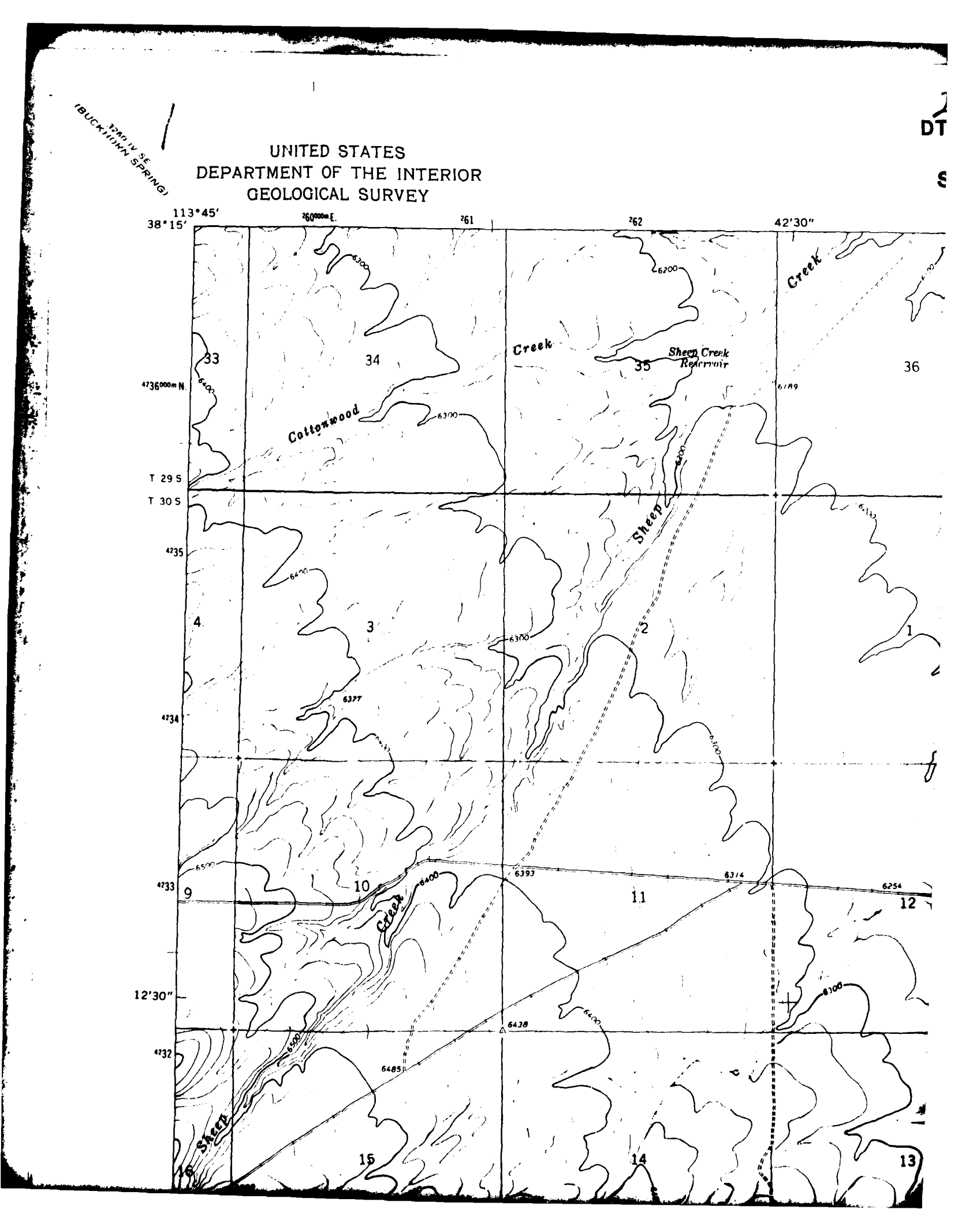
THE TETONS, UTAH

N3807.5--W11330/7.5

1971

DENISE PIERATTI

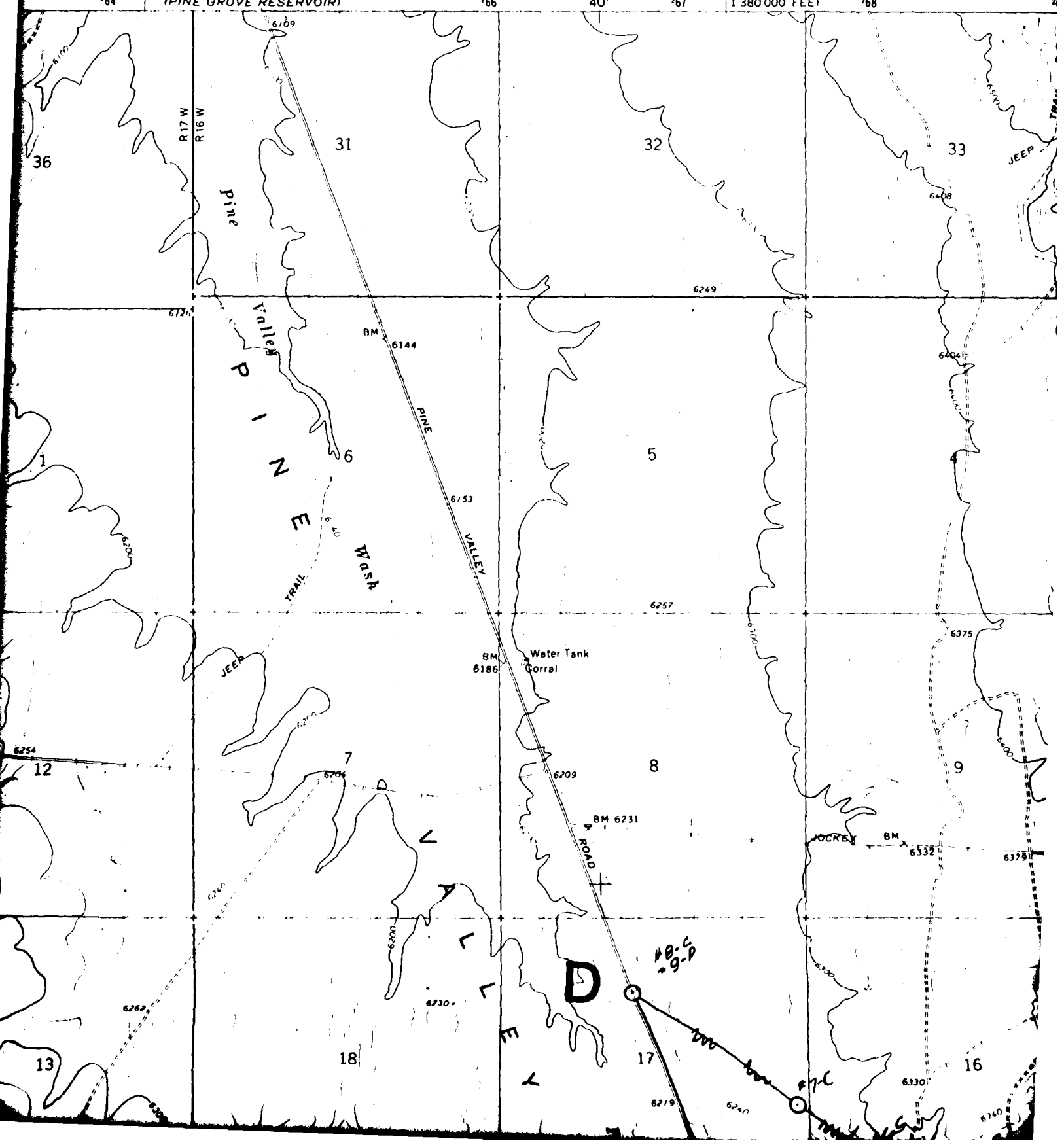
9


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
113°45'
38°15'
260000m E.
261
262
42'30"
4236000m N.
4235
4234
4233
12'30"
4232
T 29 S
T 30 S
Cottonwood Creek
Sheep Creek Reservoir
Sheep Creek
Sheep Creek
33
34
35
36
4
3
2
1
9
10
11
12
16
15
14
13
6377
6393
6314
6254
6438
6485
6189

DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

OBSERVATION

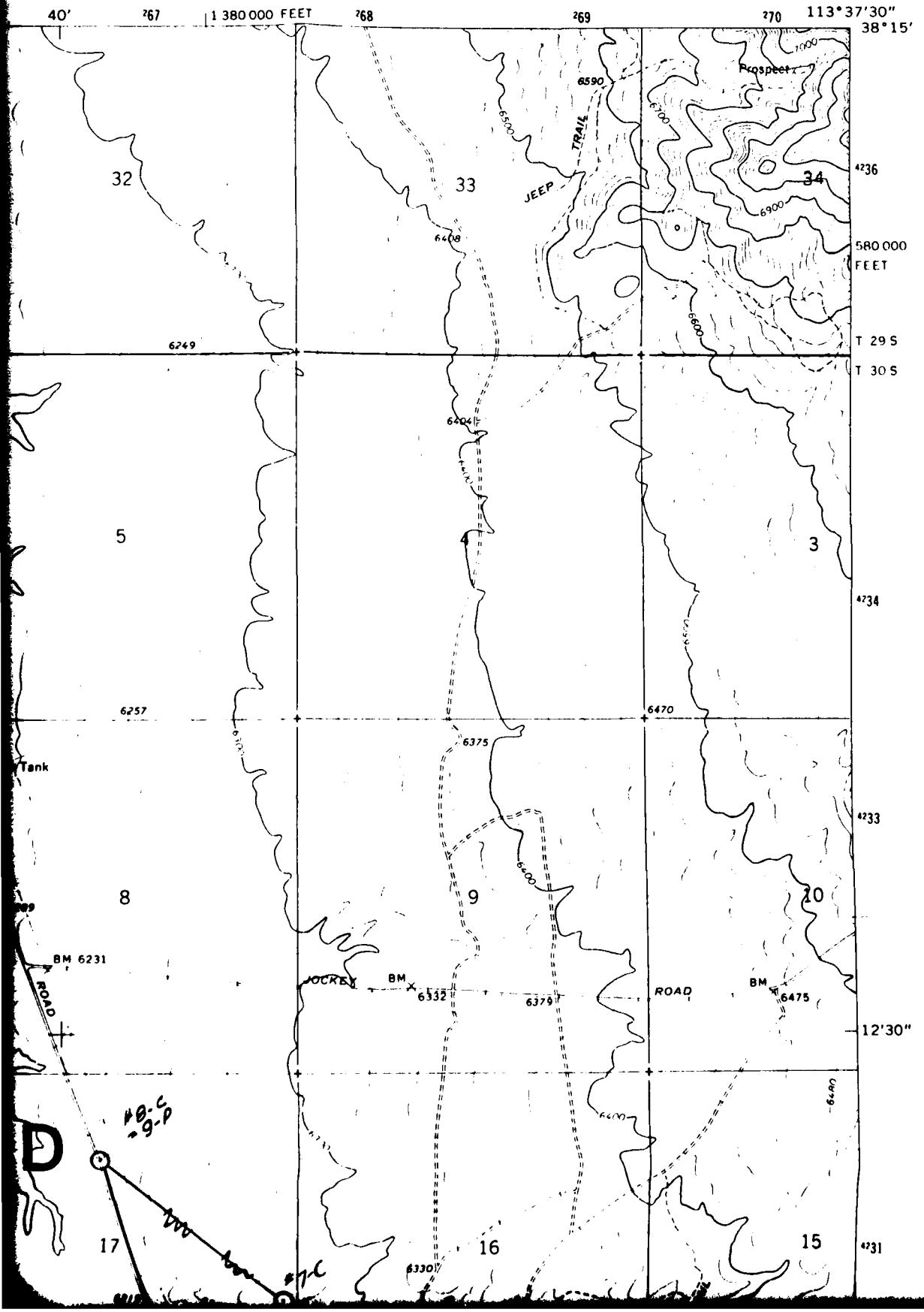
7.5 MINUTE



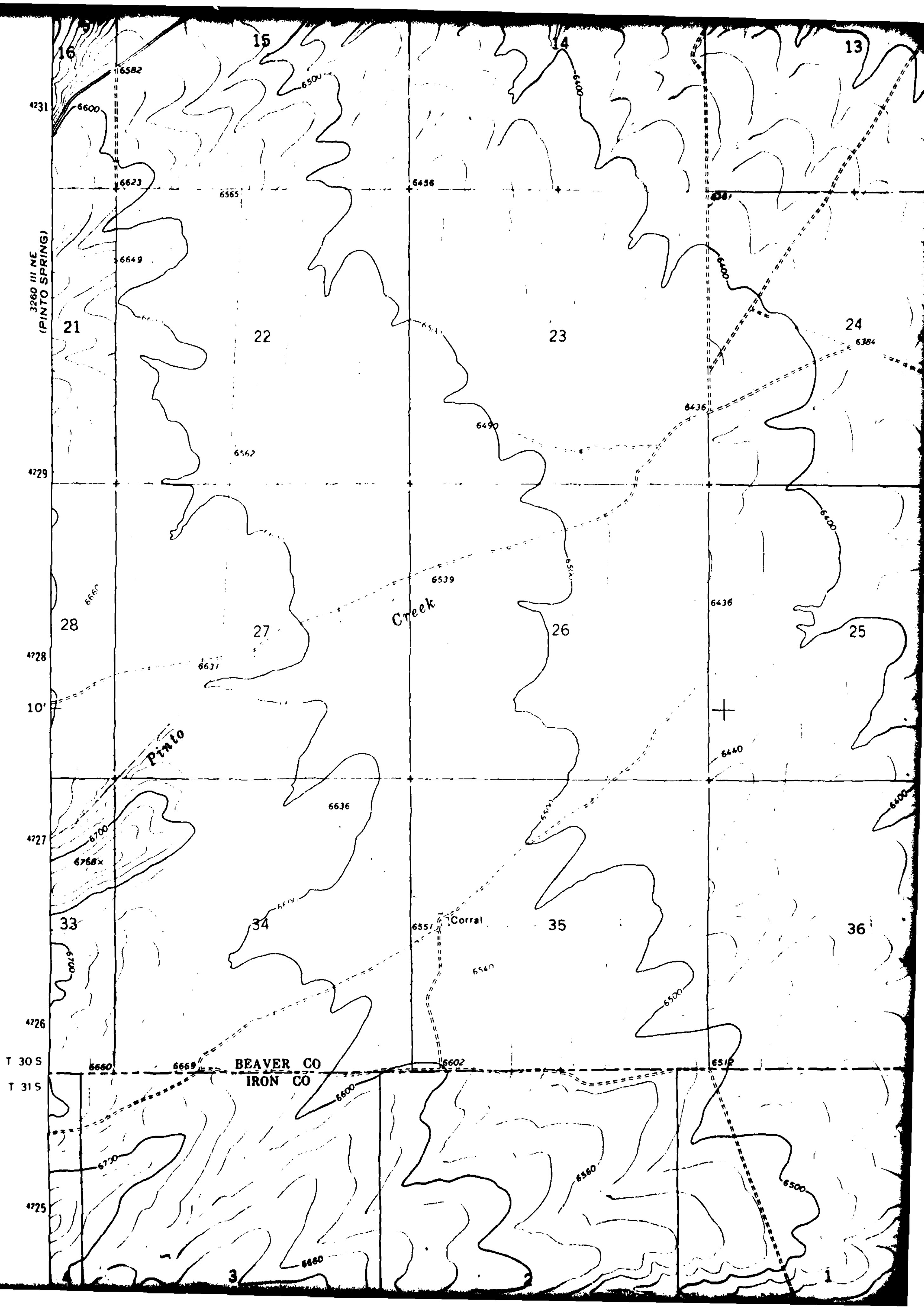
3

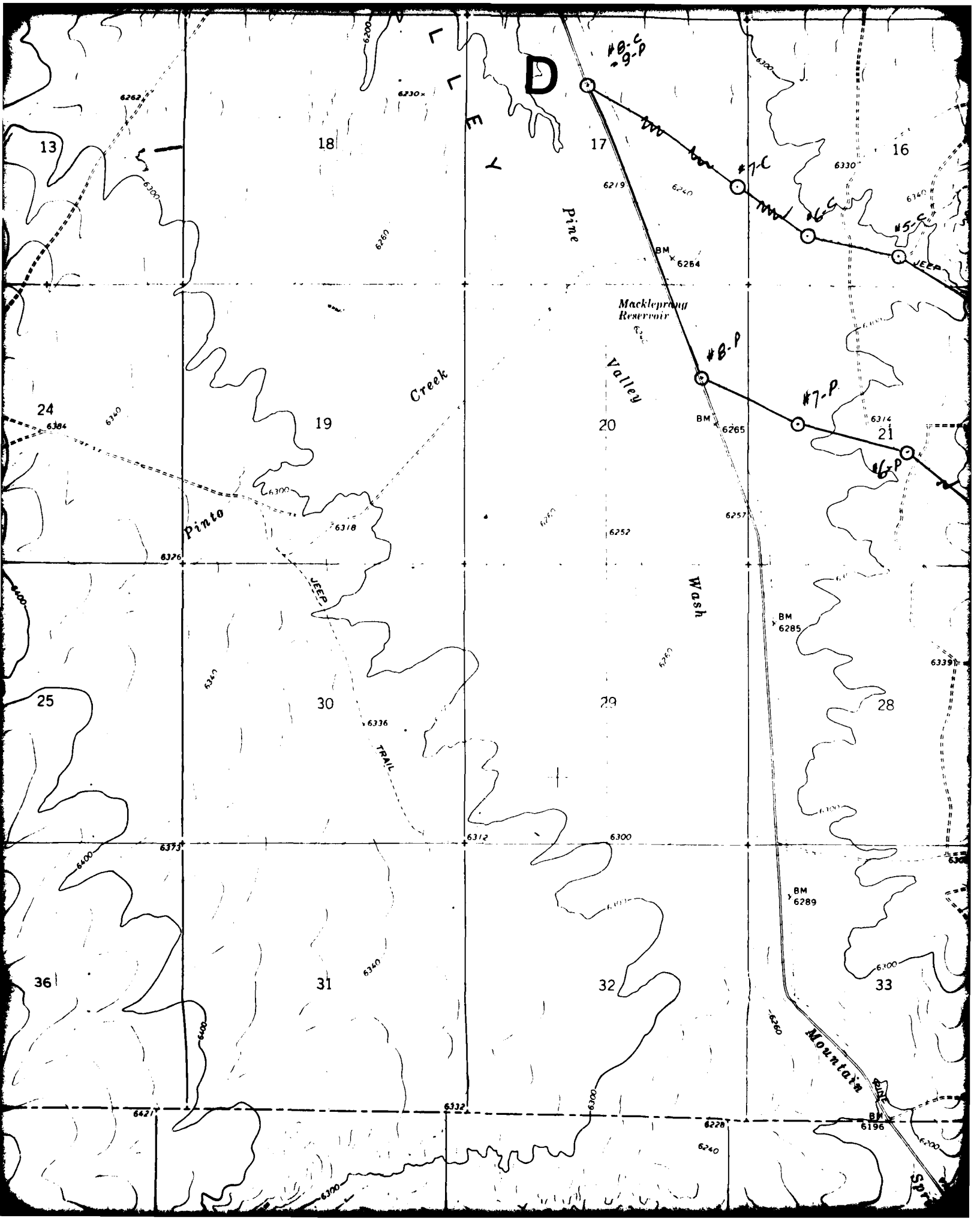
3260 I SE
(LAMERDORF PEAK)

OBSERVATION KNOLL QUADRANGLE
UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)

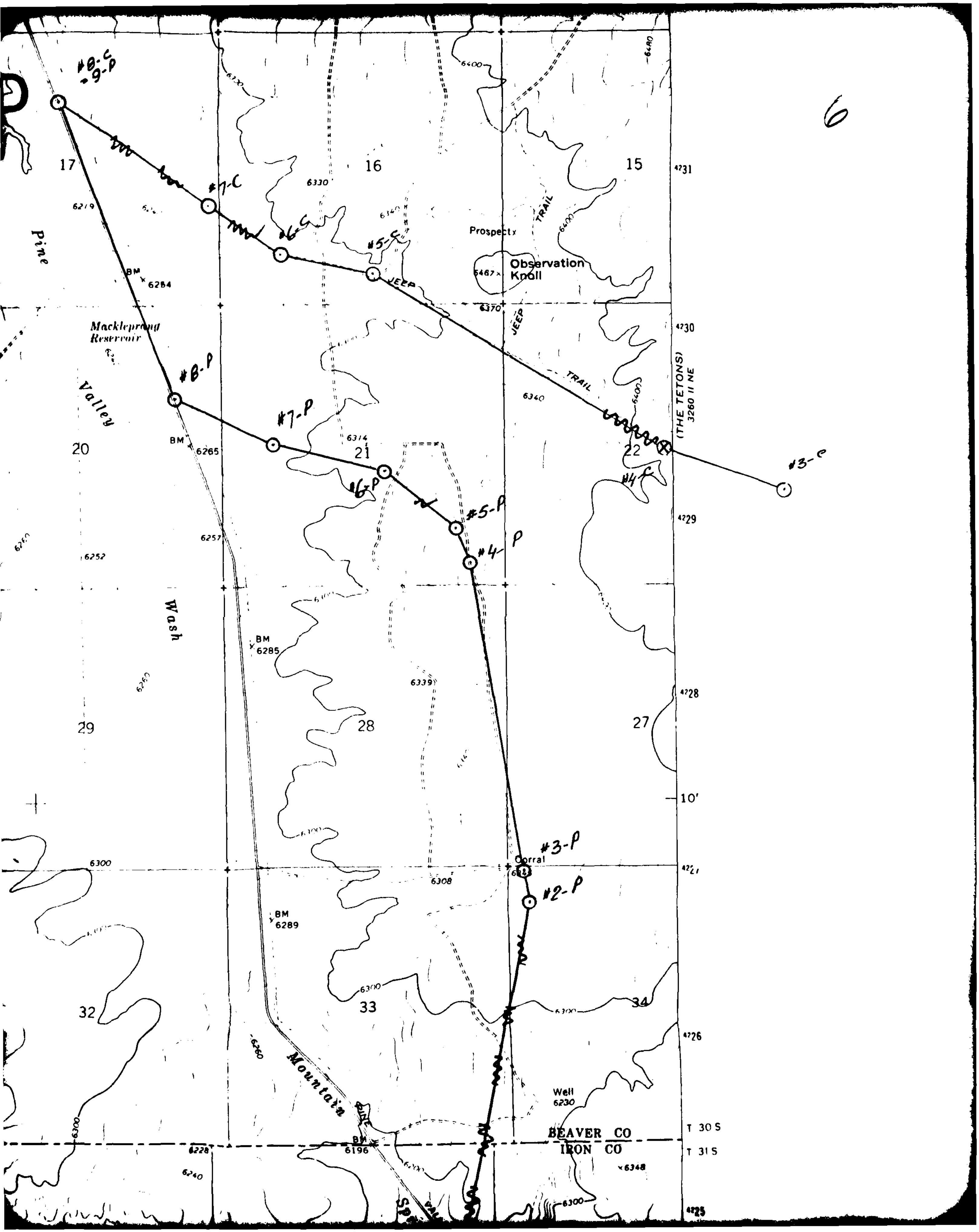


4

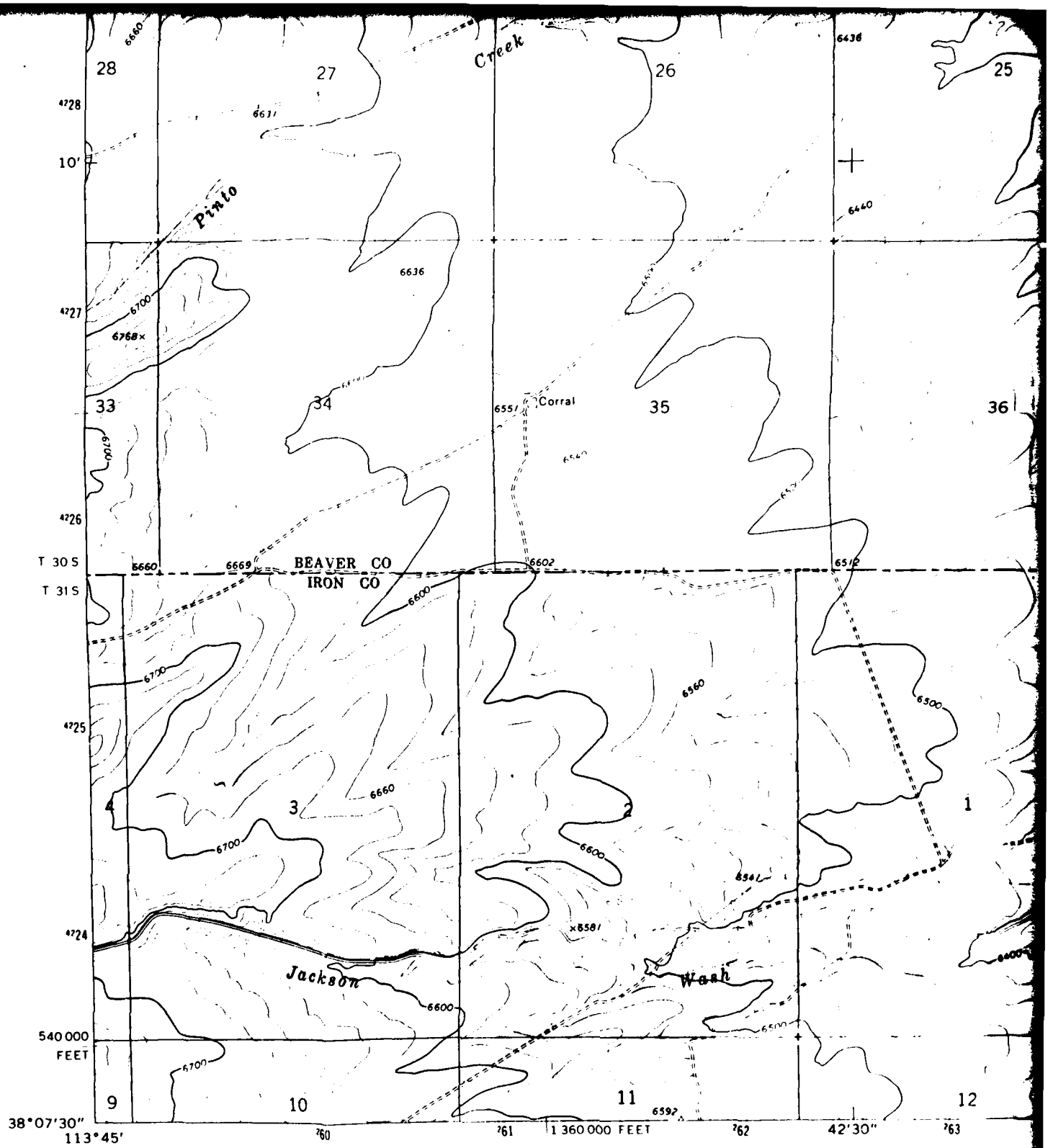

3260 III NE
(PINTO SPRING)
16
15
14
13
21
22
23
24
28
27
26
25
33
34
35
36
3
1
4231
4229
4228
10'
4227
4226
4225
T 30 S
T 31 S
BEAVER CO
IRON CO
Pinto
Creek
Corral
6582
6600
6500
6400
6623
6565
6456
6649
6384
6436
6490
6562
6539
6631
6436
6440
6636
6700
6768
6551
6540
6500
6660
6669
6602
6512
6800
6720
6560
6660


#8-C
#9-P
#7-C
#6-C
#5-C
JEEP
#8-P
#7-P
#6-P
Mackleprang Reservoir
Pine Valley Wash
Pinto Creek
JEEP
TRAIL
BM 6264
BM 6265
BM 6285
BM 6289
BM 6196
Mountain
13
18
17
16
24
19
20
21
25
30
29
28
36
31
32
33
6262
6230
6219
6330
6340
6260
6384
6340
6300
6318
6326
6257
6252
6400
6340
6336
6312
6300
6373
6400
6400
6421
6332
6300
6228
6240
6300
6200

6



#8-C
#9-P
#7-C
#6-C
#5-C
#4-C
#3-C
#8-P
#7-P
#6-P
#5-P
#4-P
#3-P
#2-P
17
16
15
20
21
22
29
28
27
32
33
34
Pine
Valley
Wash
Mountain
Macklepraug Reservoir
Prospect
Observation Knoll
6467
JEEP
TRAIL
Corral
Well 6230
BEAVER CO
IRON CO
T 30 S
T 31 S
(THE TETONS) 3260 II NE
4231
4230
4229
4228
10'
4226
4225
BM 6284
BM 6265
BM 6285
BM 6289
BM 6196
6330
6370
6340
6314
6339
6308
6300
6257
6252
6228
6240
6348



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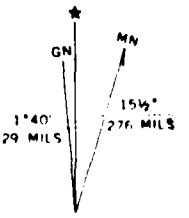
Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic) *1000-meter Universal Transverse Mercator grid ticks*, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

(STEAMBOAT MTN.)
3260 III SE

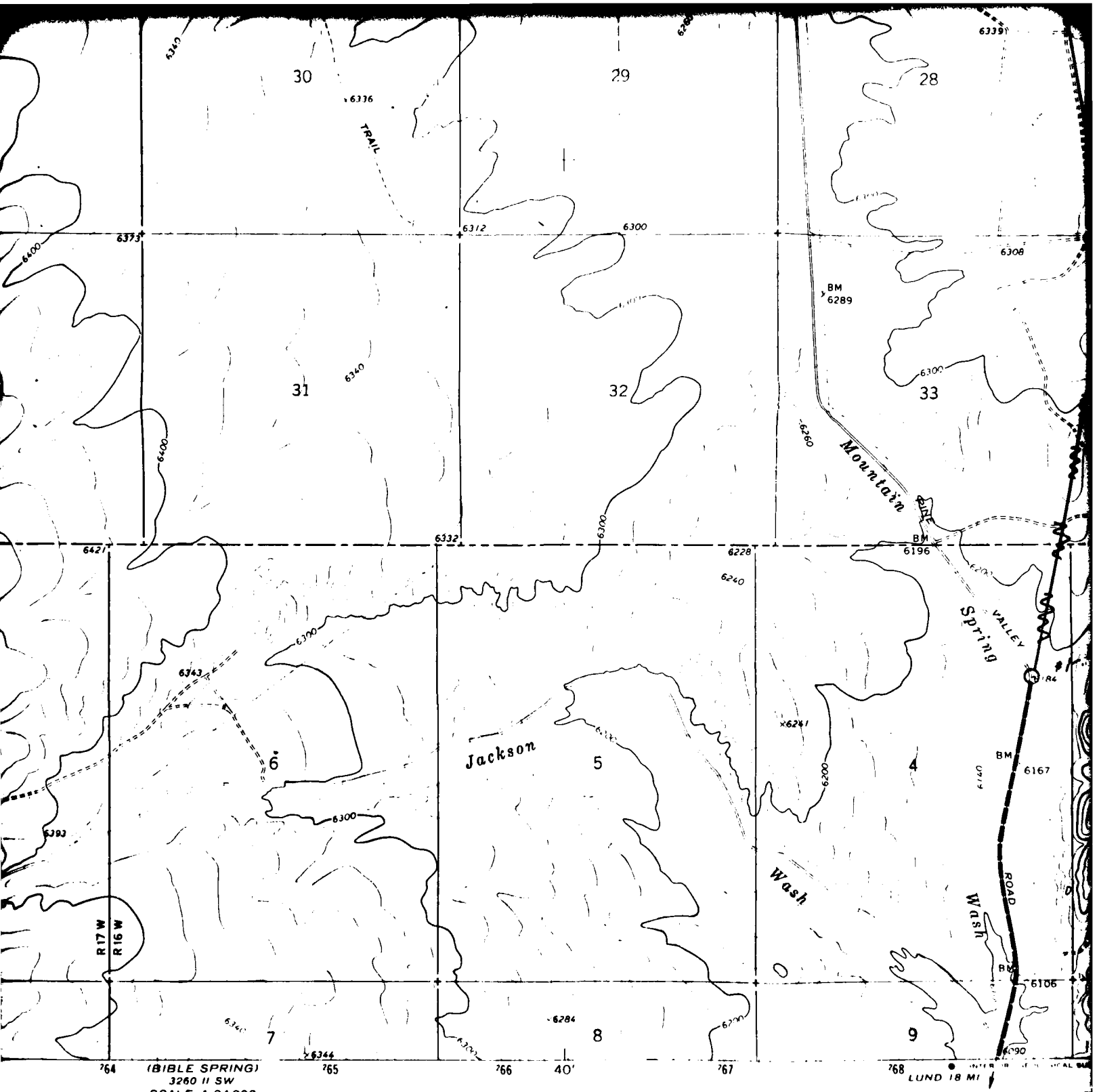


UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000

FOR SALE BY U.S.
A FOLDER

7



SCALE 1 24000

0 1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

0 5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASS

Primary highway hard surface

Secondary highway hard surface

Interstate Route U.

UTAH

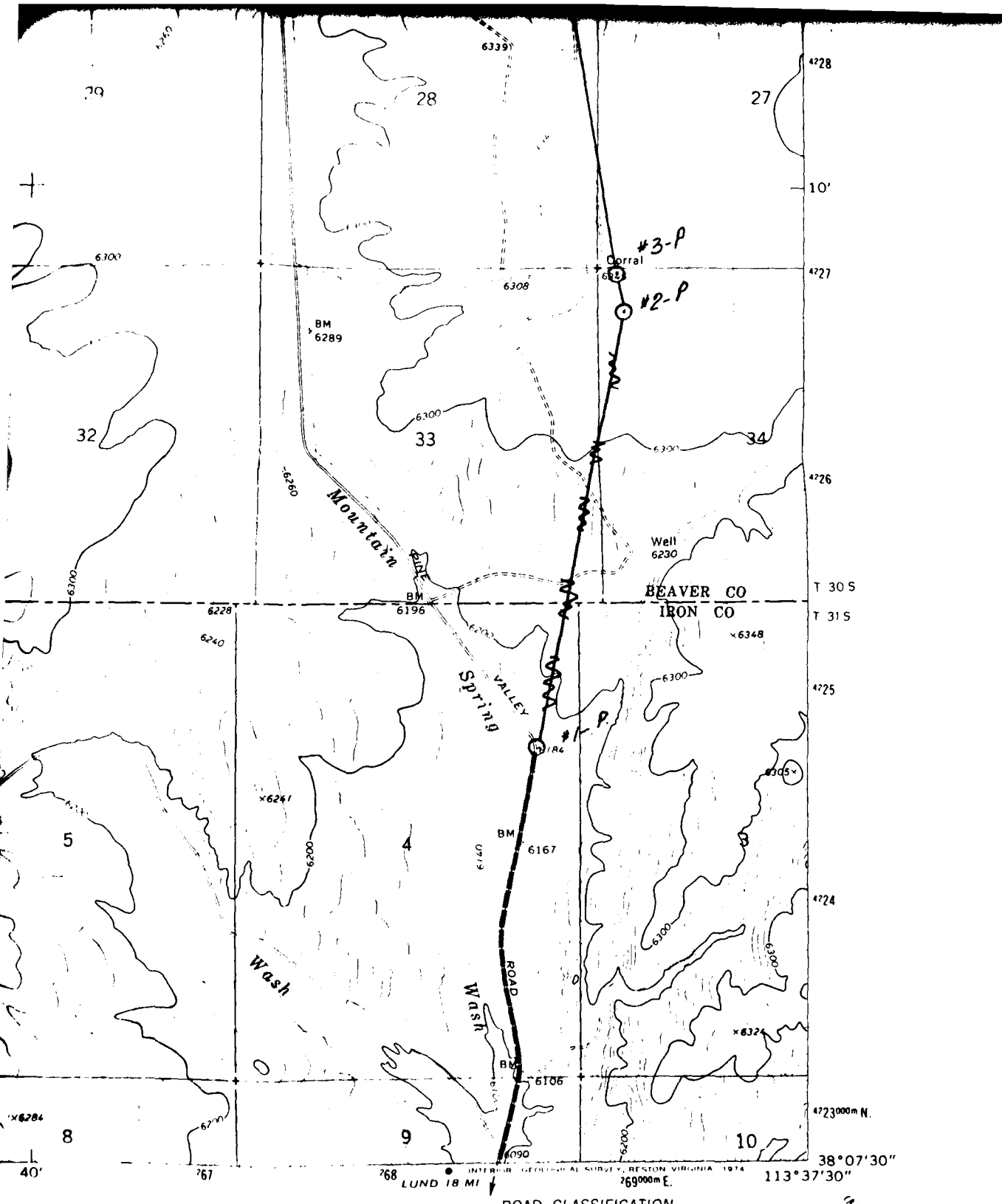
QUADRANGLE LOCATION

Ertec
The Earth Technology Corporation

OBSERVAT
N380

IS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

AMS



ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

( ) Interstate Route ( ) U. S. Route ( ) State Route

UTAH

QUADRANGLE LOCATION

Denise Pieratti

Ertec
The Earth Technology Corporation

OBSERVATION KNOLL, UTAH

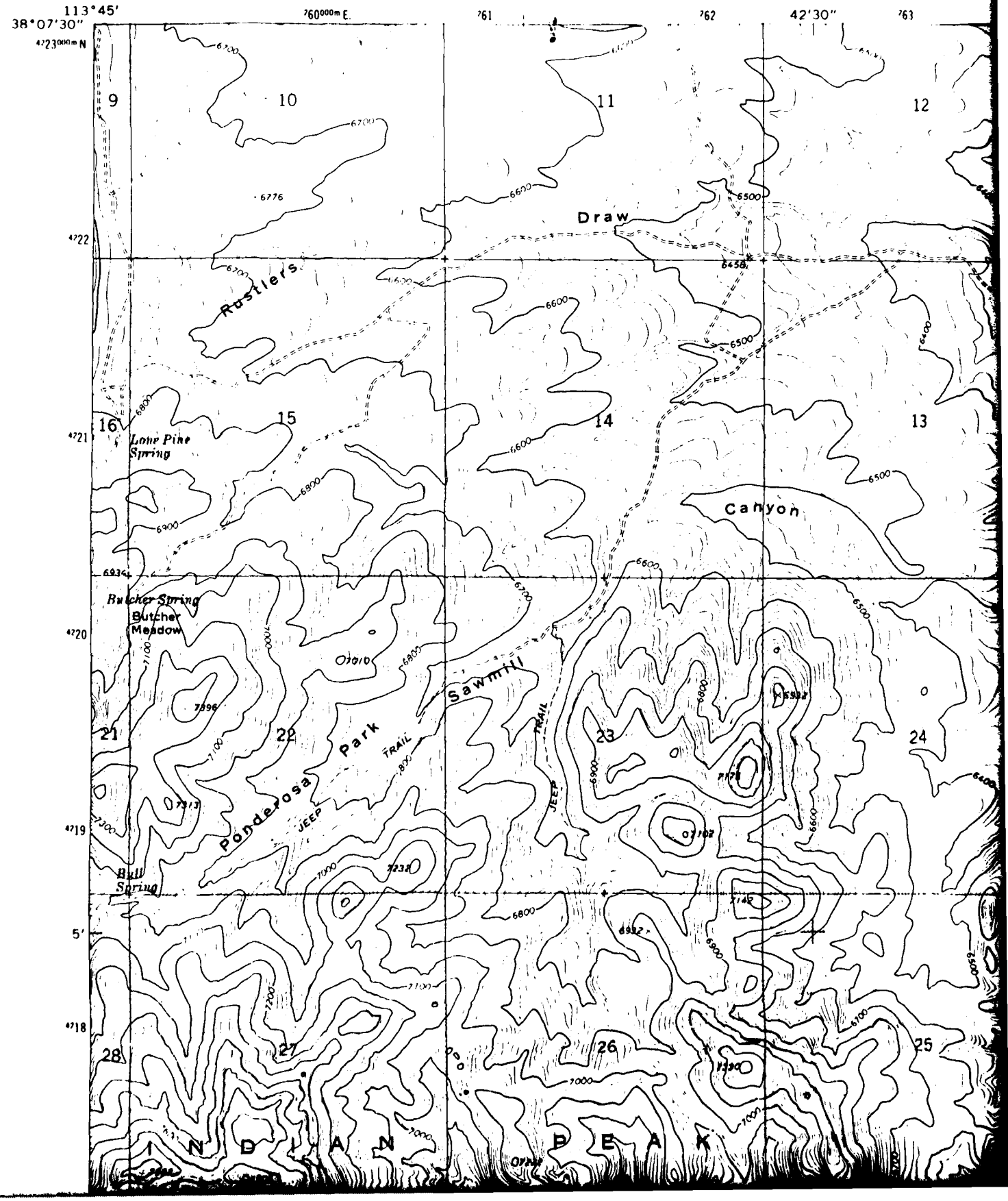
N3807.5—W11337.5/7.5

1971

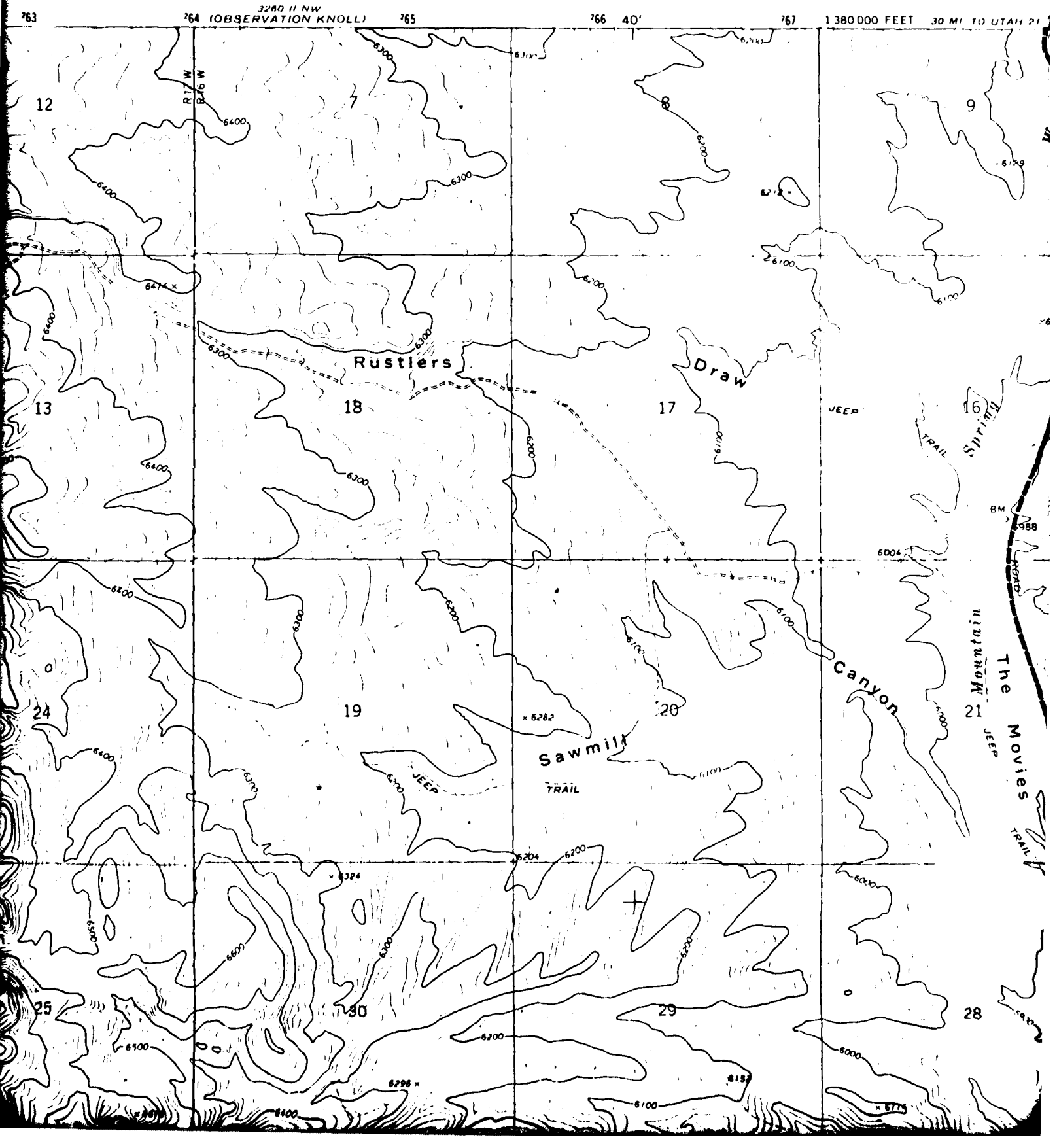
AMS 3260 II NW—SERIES V897

4

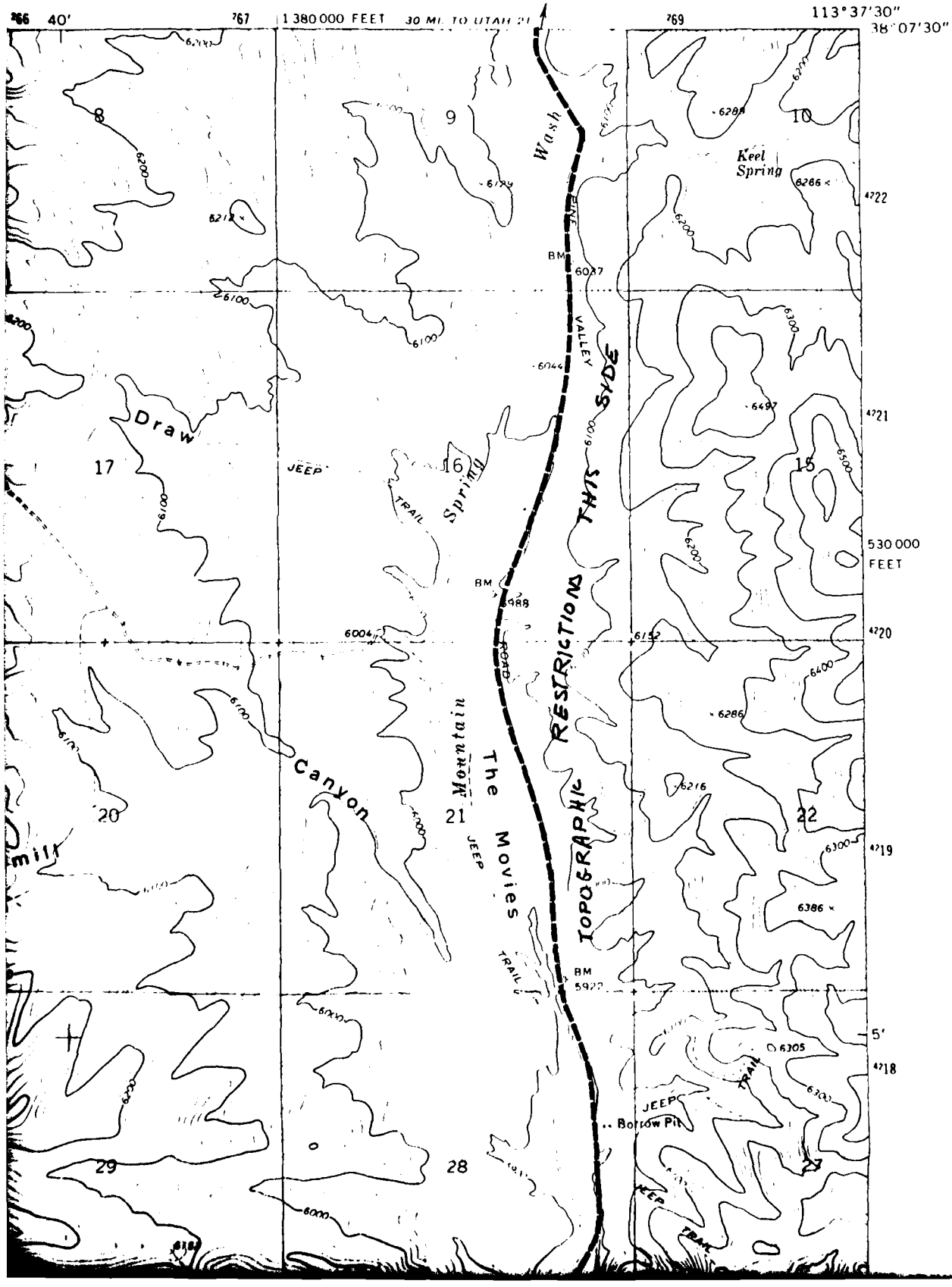
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

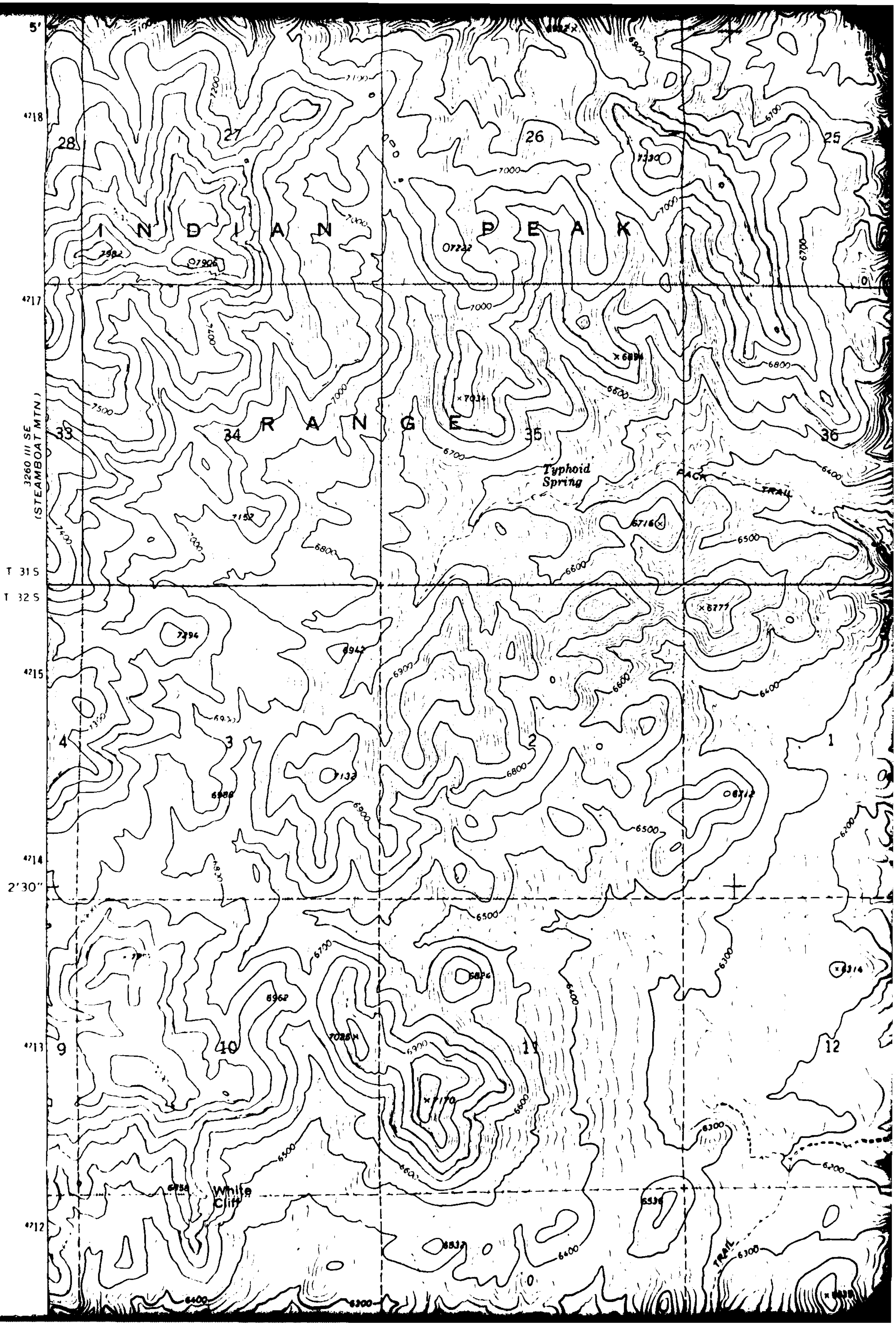


DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y



BIBLE SPRING QUADRANGLE
UTAH—IRON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)





5'
4218
4217
4215
4214
4213
4212
2'30"
T 31 S
T 32 S
3260 III SE
(STEAMBOAT MTN.)
INDIAN PEAK
RANGE
Typhoid Spring
PACK TRAIL
TRAIL
White Cliff
28
27
26
25
33
34
35
36
4
3
2
1
9
10
11
12
7330
7222
7906
7152
7034
6884
6716
6777
7294
6942
7132
6986
6712
6826
6962
7025
7170
6956
6536
6533
6314
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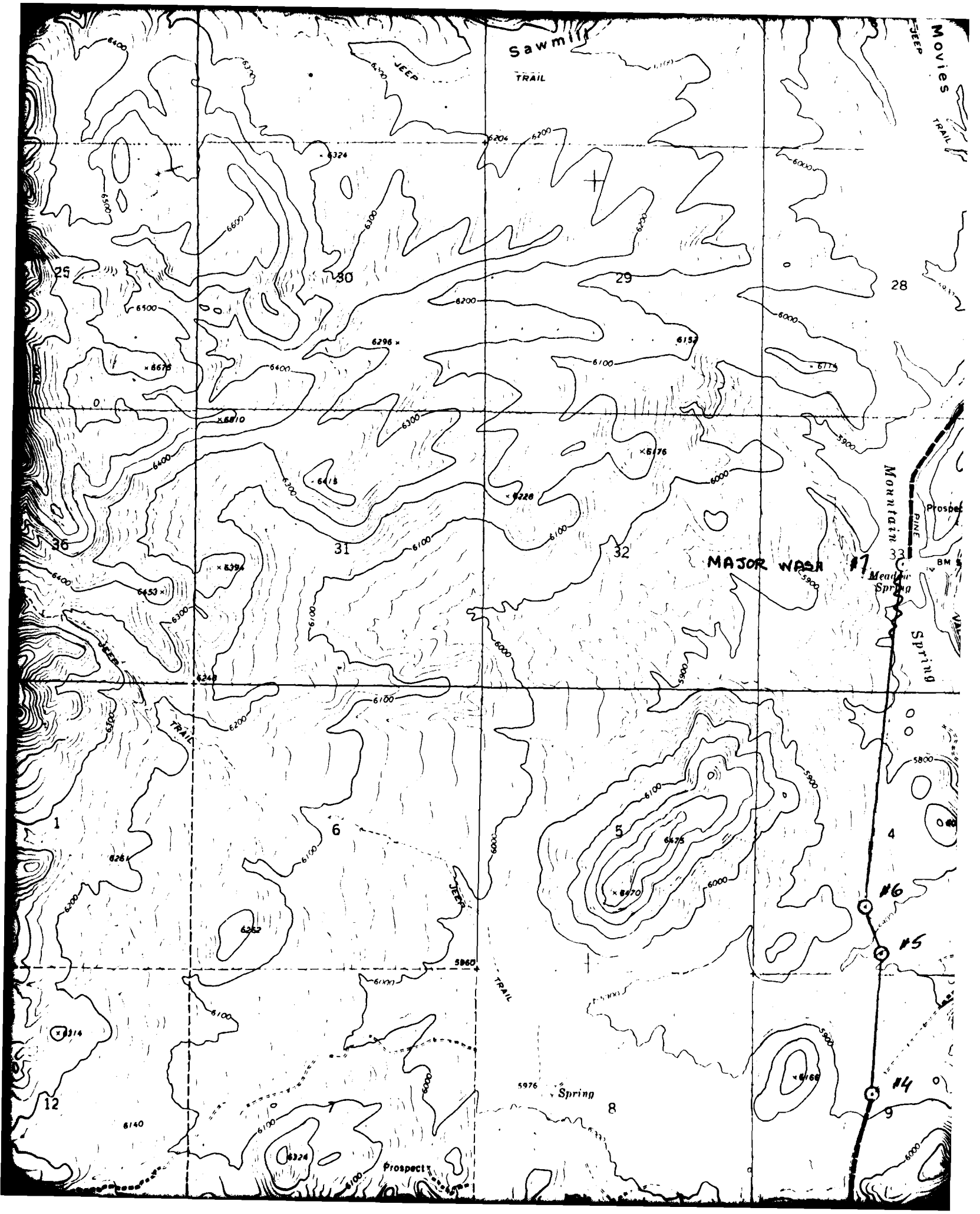
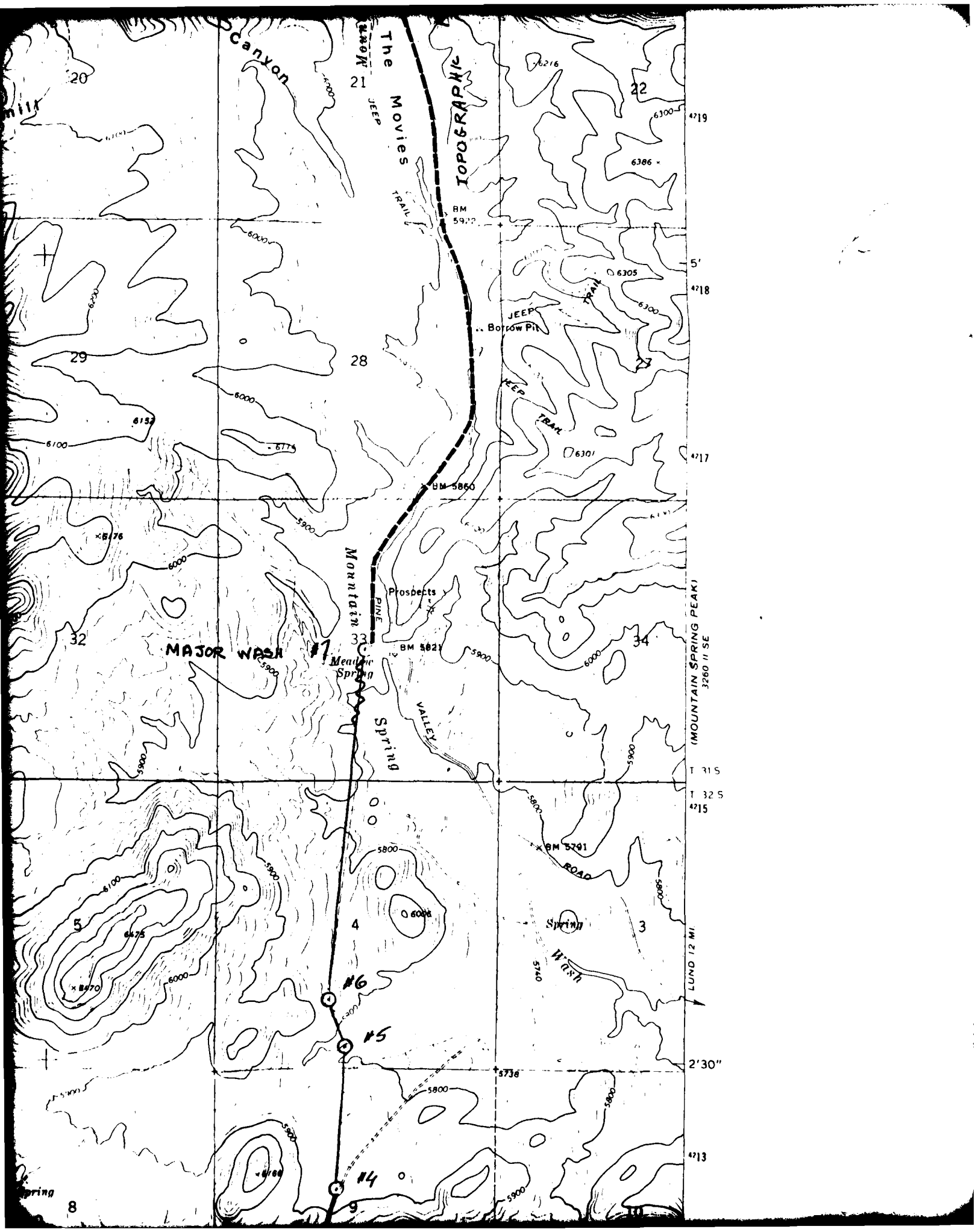
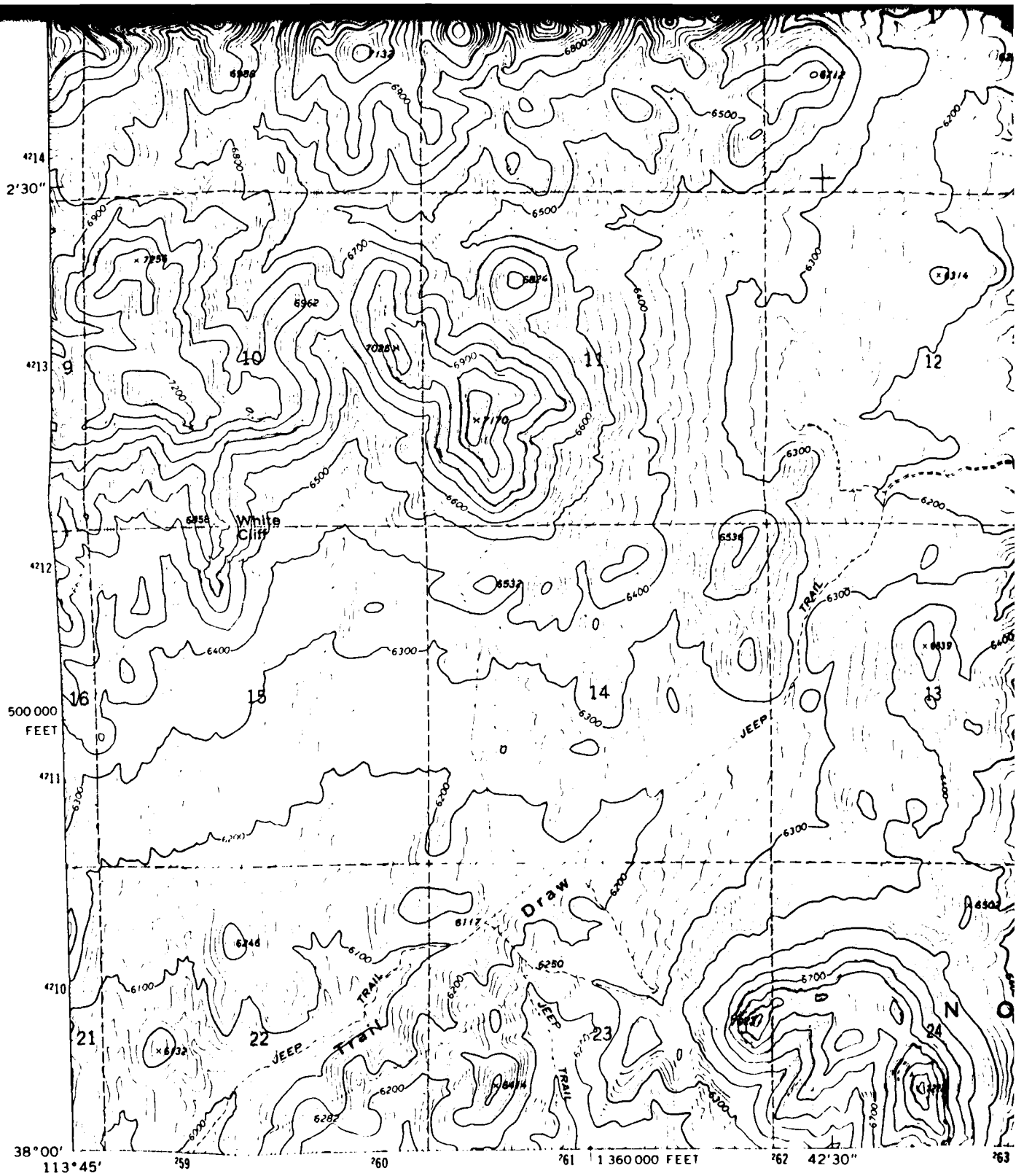
7100
7200
7400
7500
6800
6700
6600
6500
6400
6300
6200


Sawmill
TRAIL
JEEP
Movies
TRAIL
MOUNTAIN
Prospect
PINE
Meadow Spring
Spring
MAJOR WASH #1
JEEP
TRAIL
JEEP
TRAIL
#6
#5
#4
Spring
Prospect
25
30
29
28
36
31
32
33
1
6
5
4
12
8
9


TOPOGRAPHIC
The Movies
Canyon
Mountain
Spring
Valley
Wash
Prospects
Borrow Pit
JEEP TRAIL
BM 5860
BM 5821
BM 5791
MAJOR WASH #1
#6
#5
#4
20
21
22
28
29
32
33
34
4219
4218
4217
4215
4213
(MOUNTAIN SPRING PEAK)
3260 II SE
T 31 S
T 32 S
LUND 12 MI
2'30"



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Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

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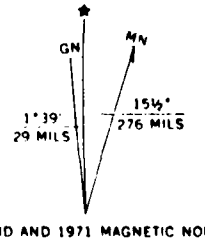
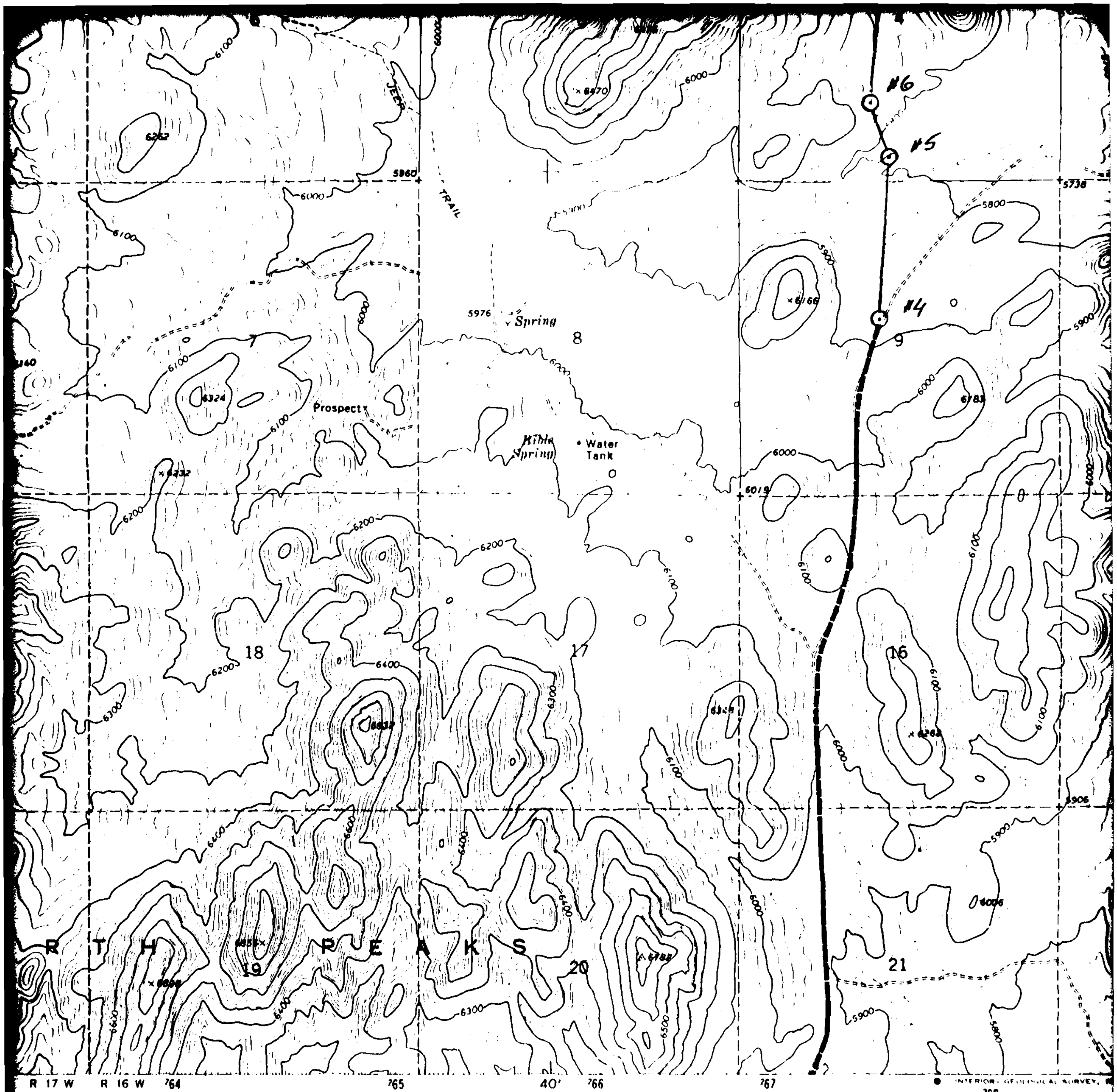


UTM GRID AND 1971 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



SCALE 1 24 000

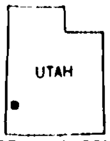
0 1 MILE

1000 2000 3000 4000 5000 6000 7000 FEET

5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

ROAD CLASSIFIC

Primary highway, hard surface — Light impr

Secondary highway, hard surface — Unim

Interstate Route — U S R

Propert

BIBL

N

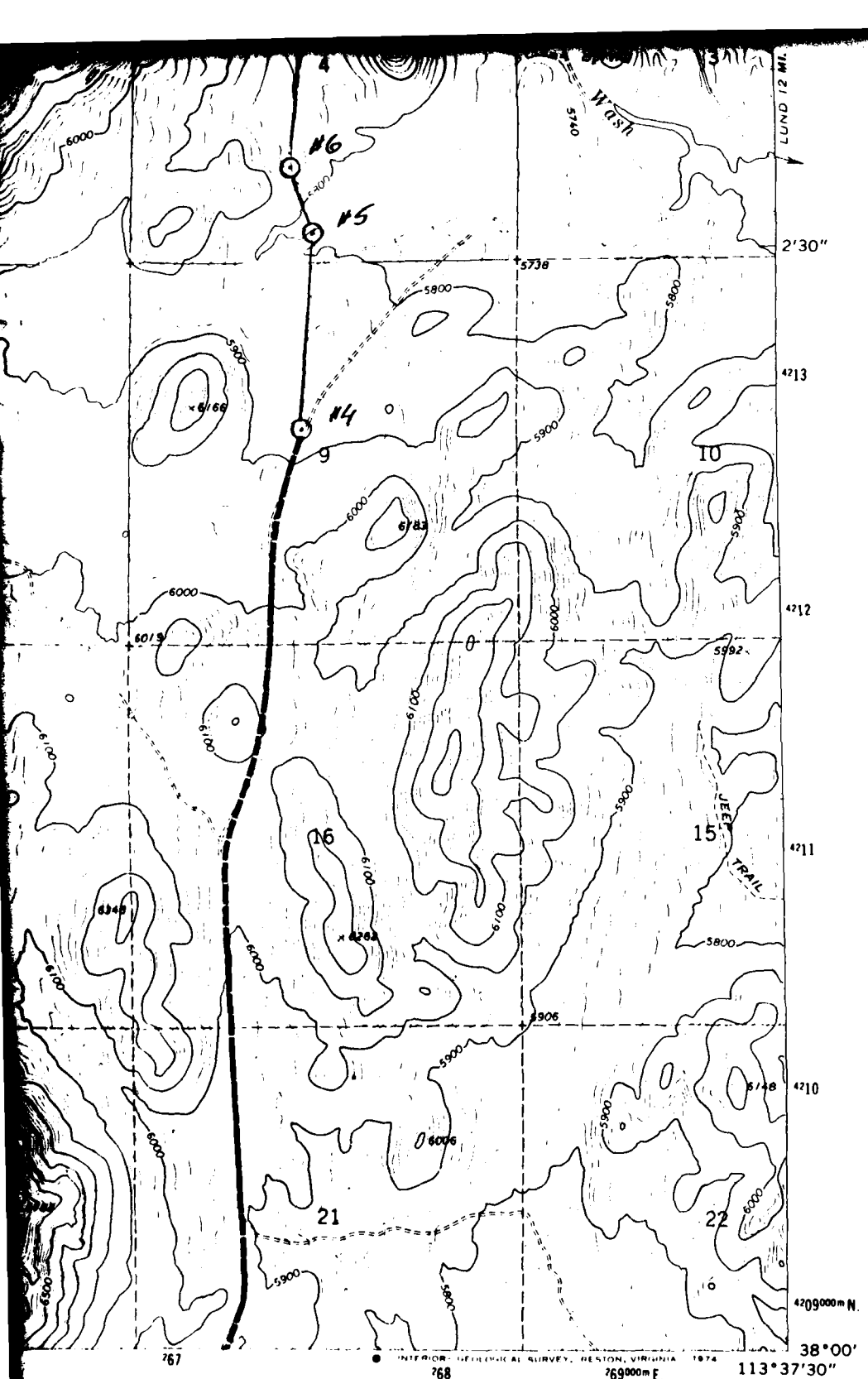
Ertec

The Earth Technology Corporation

AP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

LOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

RIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1974

ROAD CLASSIFICATION

Primary highway, hard surface

Secondary highway, hard surface

Light-duty road, hard or improved surface

Unimproved road

( ) Interstate Route ⟨ ⟩ U S Route ◯ State Route

UTAH

RANGLE LOCATION

Property of U.S. Air Force

Ertec
The Earth Technology Corporation

BIBLE SPRING, UTAH

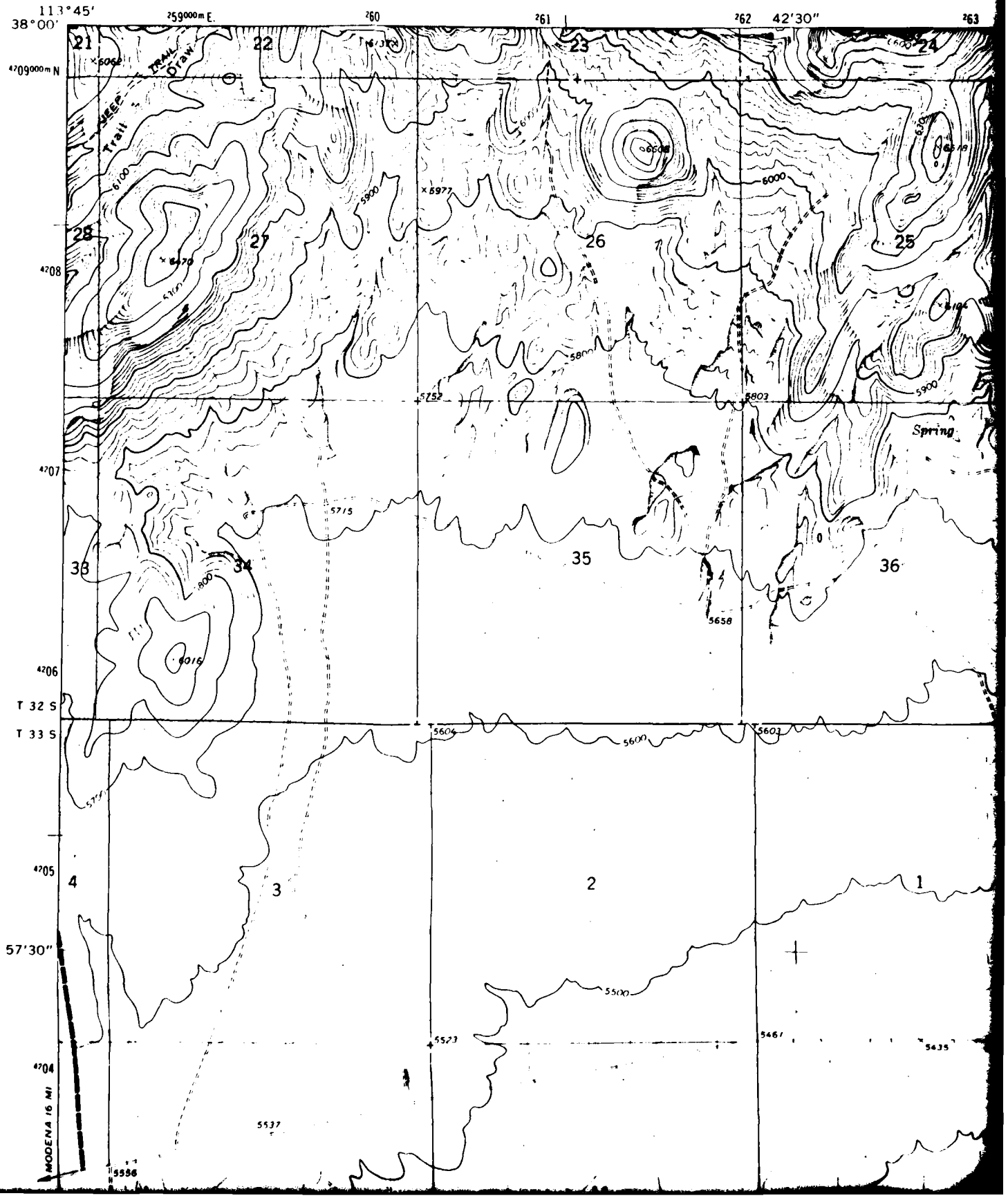
N3800—W11337.5/7.5

1971

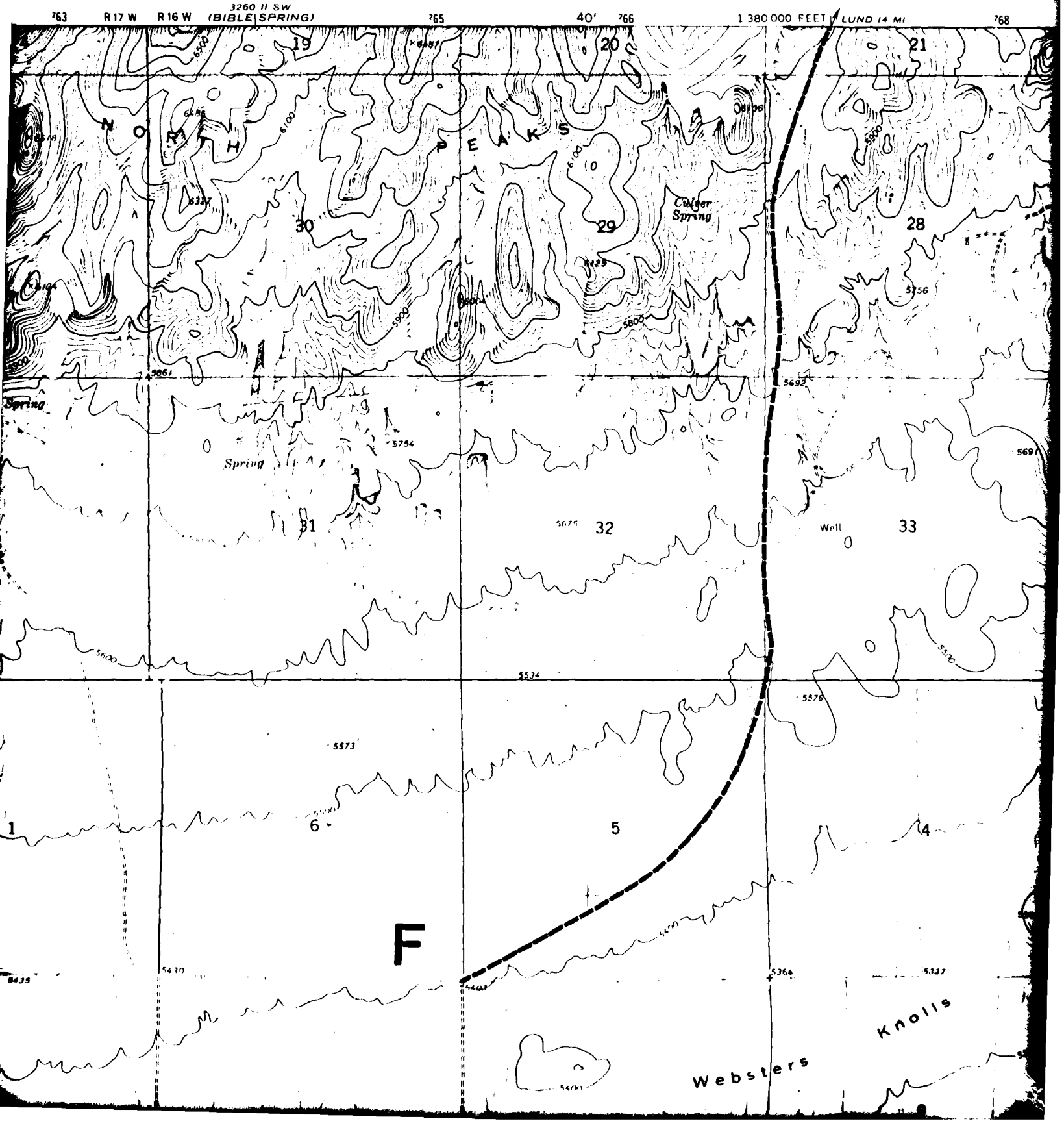
DENISE PIERATTI

4

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

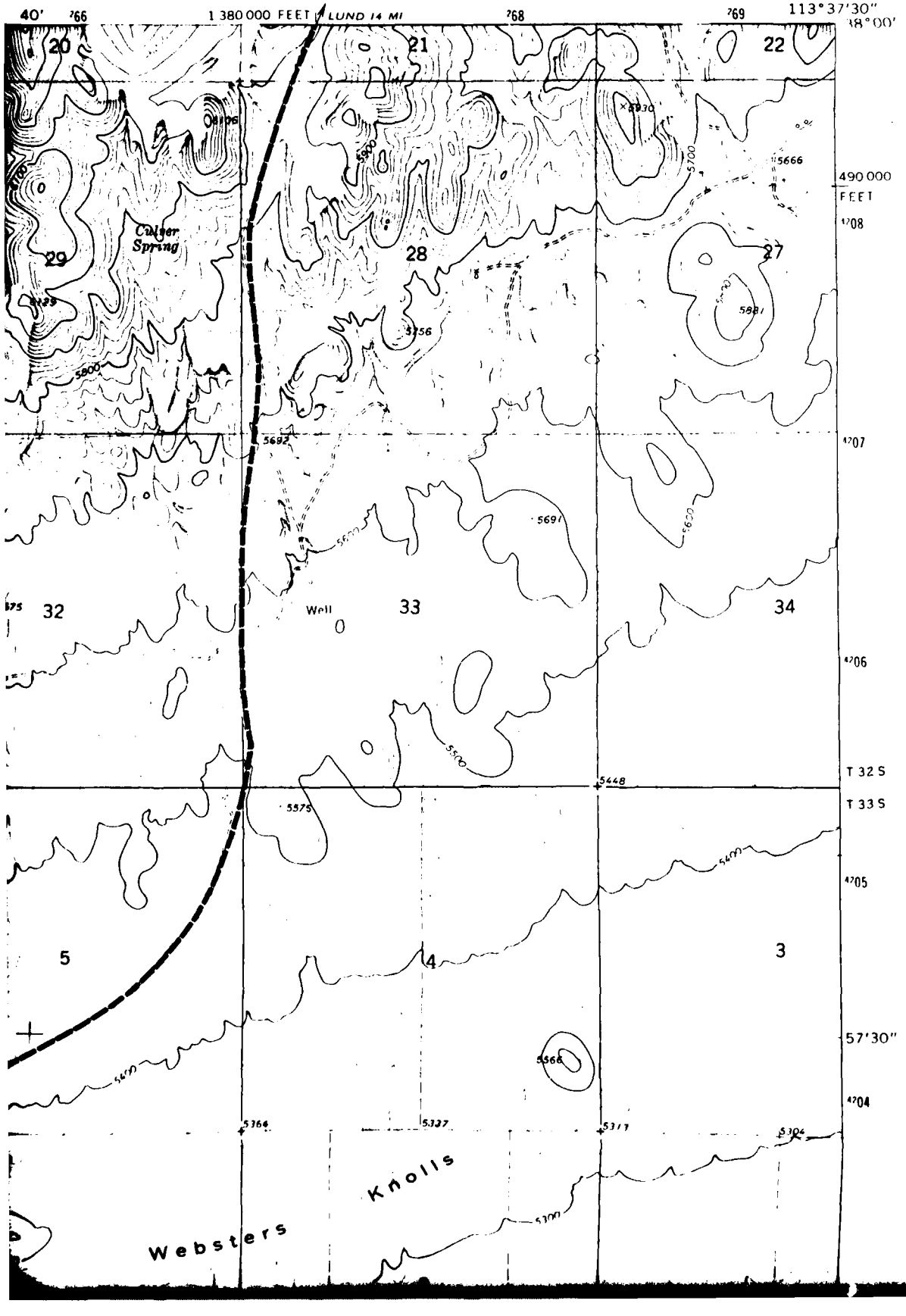


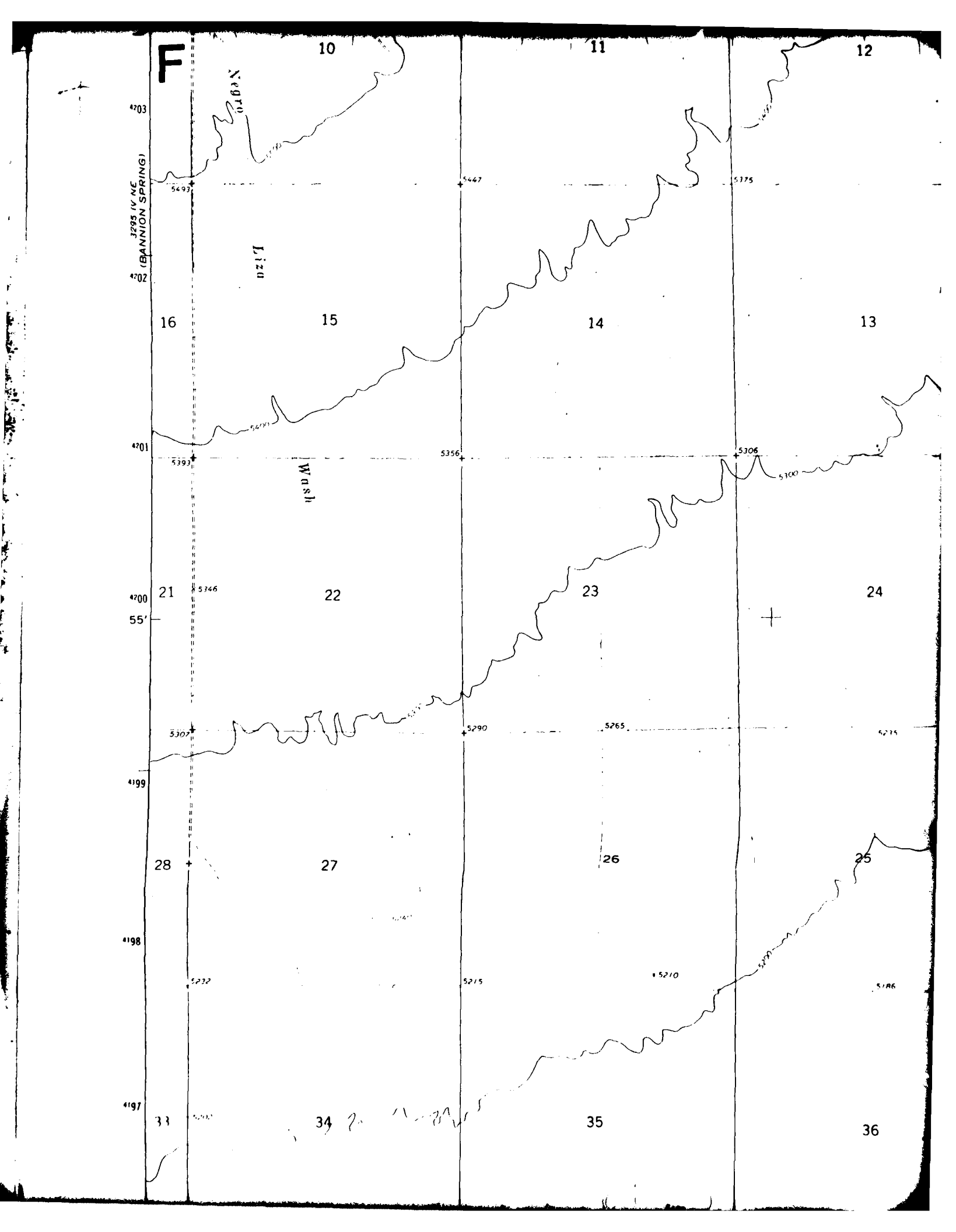
DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

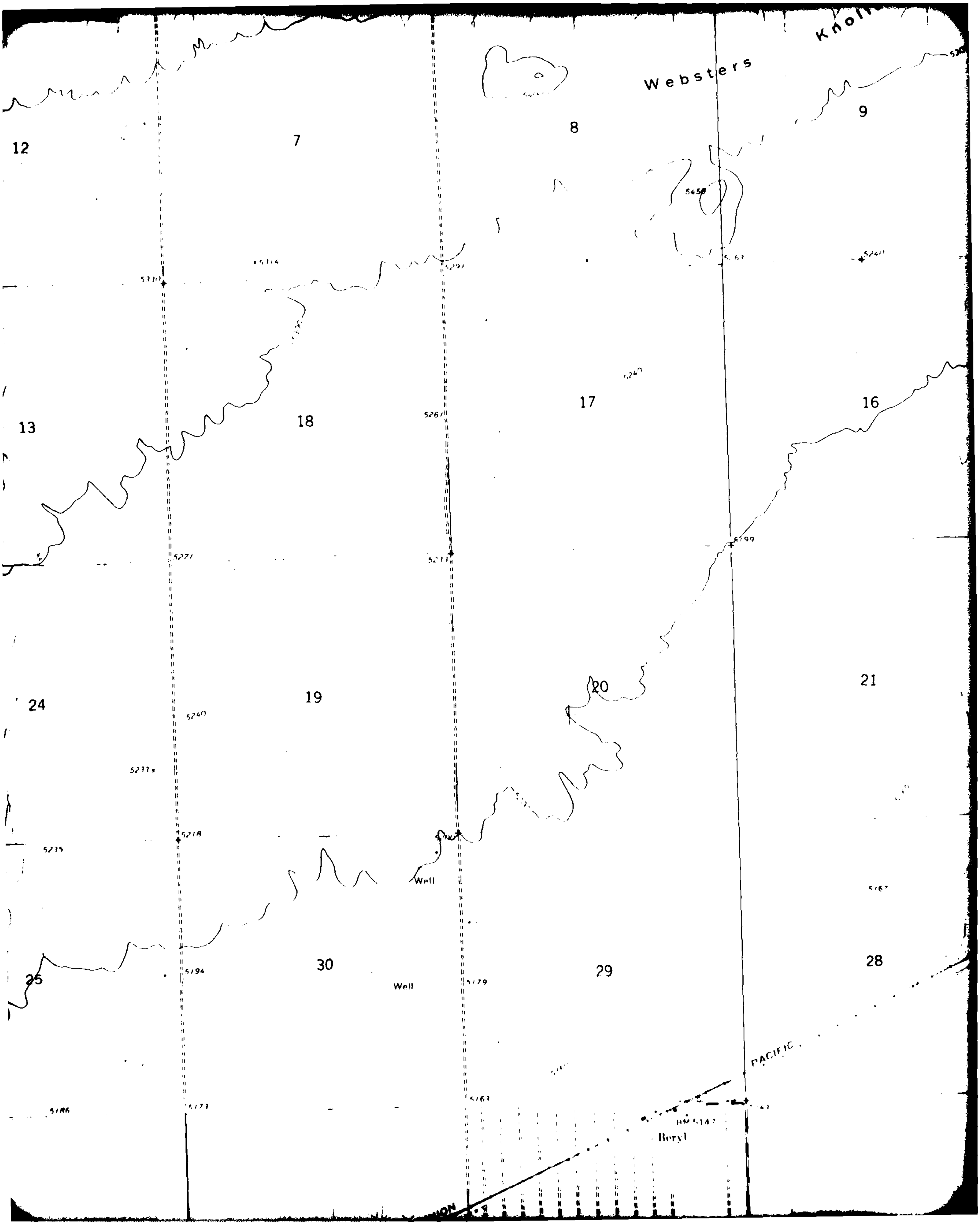


SHEET 7 OF 9

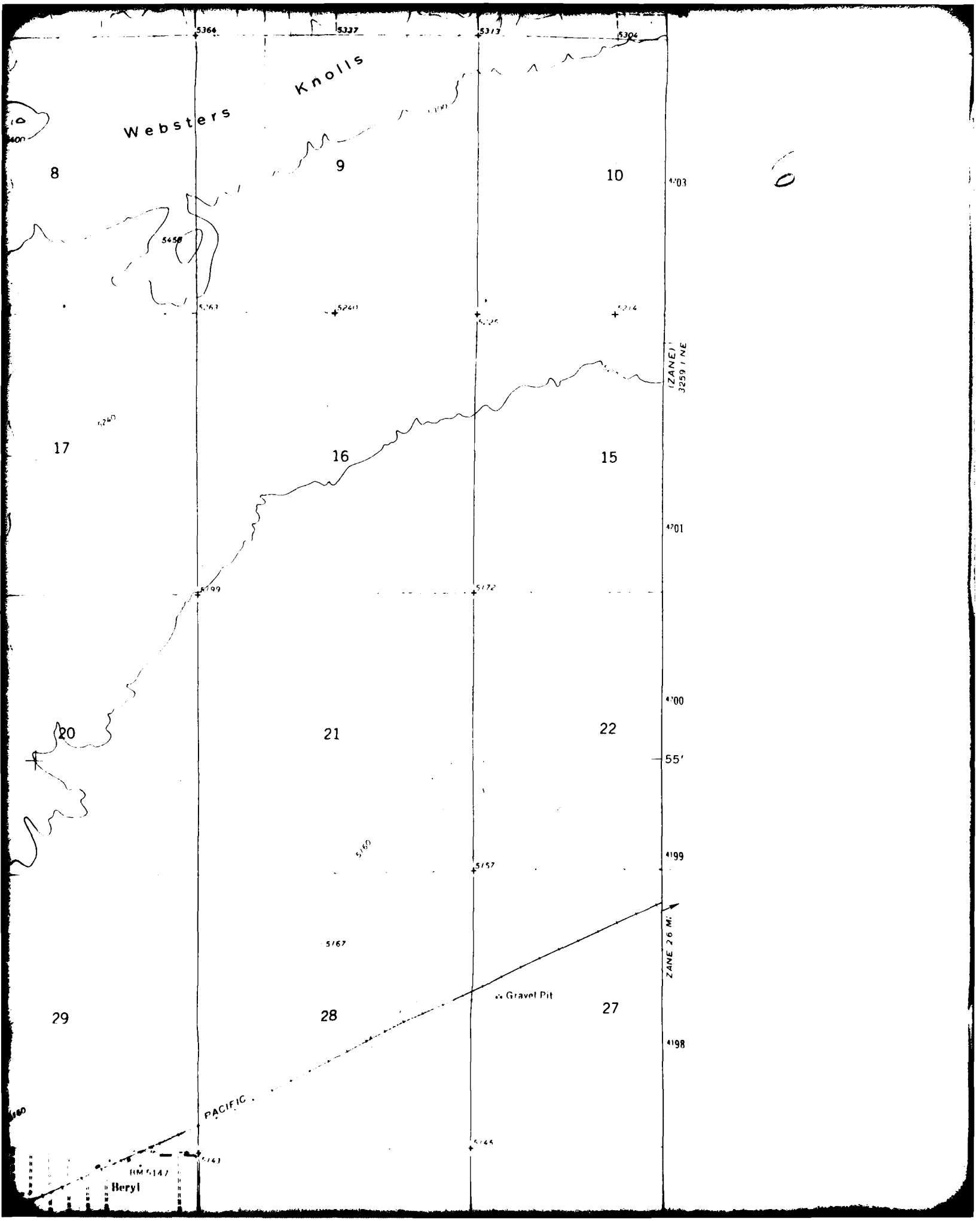
BERYL QUADRANGLE
UTAH—IRON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

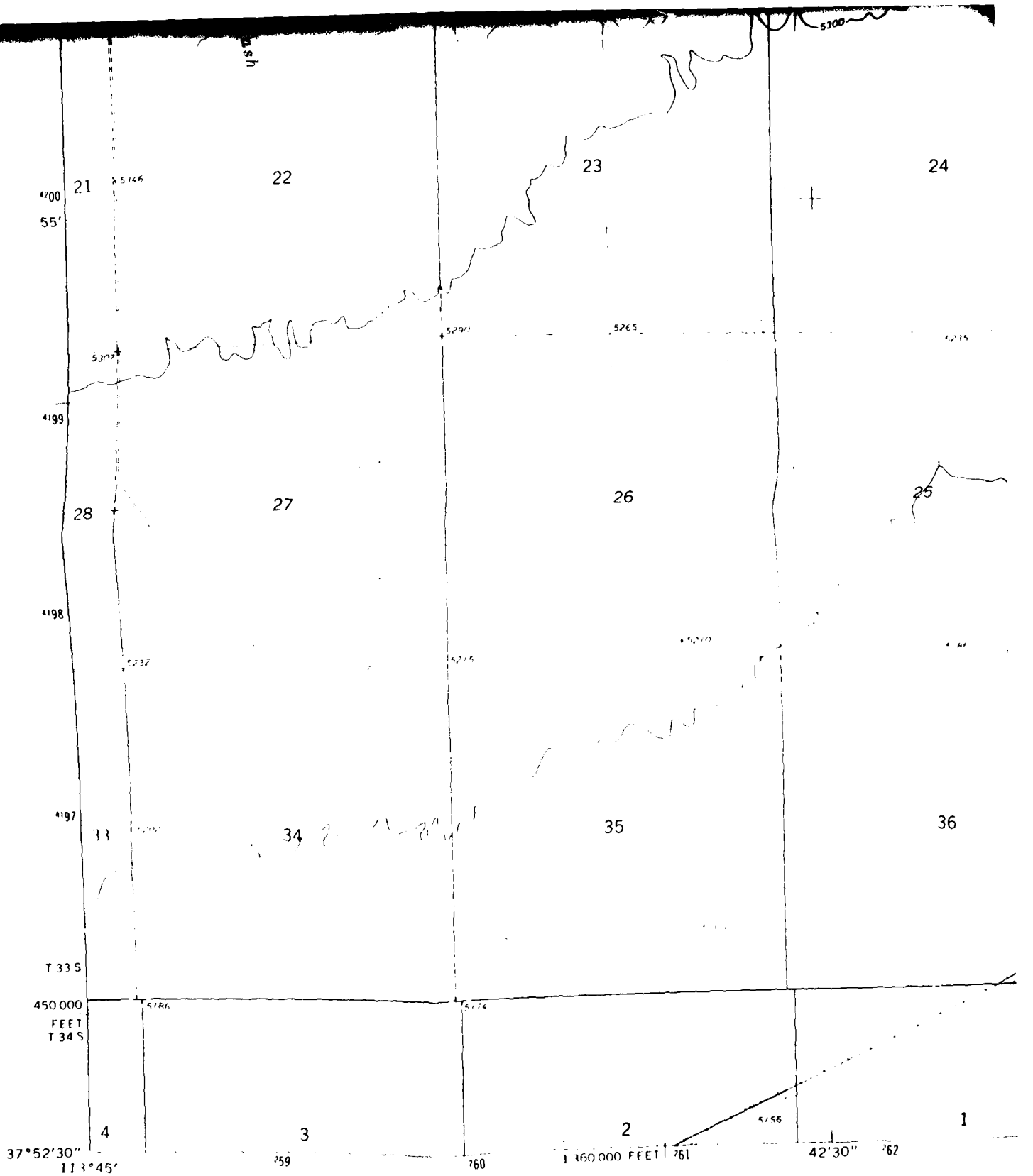



F
10
11
12
Negro
4203
3295 IV NE
(BANNION SPRING)
5493
5447
5375
Lizo
4202
16
15
14
13
4201
5393
5356
5306
Wash
5300
4200
55'
21
5346
22
23
24
5307
5290
5265
4199
28
27
26
25
4198
5232
5215
5210
4197
33
34
35
36



Websters
12
7
8
9
5458
5330
5297
5241
13
18
17
16
5267
5271
5199
24
19
20
21
5240
5218
5235
Well
25
30
29
28
5194
5179
Well
PACIFIC
5186
5173
5163
Beryl


Websters
Knolls
8
9
10
17
16
15
20
21
22
29
28
27
5364
5337
5313
5304
5458
5263
5241
5274
5240
5199
5172
5160
5157
5167
5145
5143
4203
4201
4200
4199
4198
(ZANE) 1
3259 I NE
ZANE 26 Mi.
Gravel Pit
PACIFIC
Beryl
6



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1972

Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic) 1000-metre Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

(HEIST) 3259 IV SE

GN MN

1°39' 15 .°

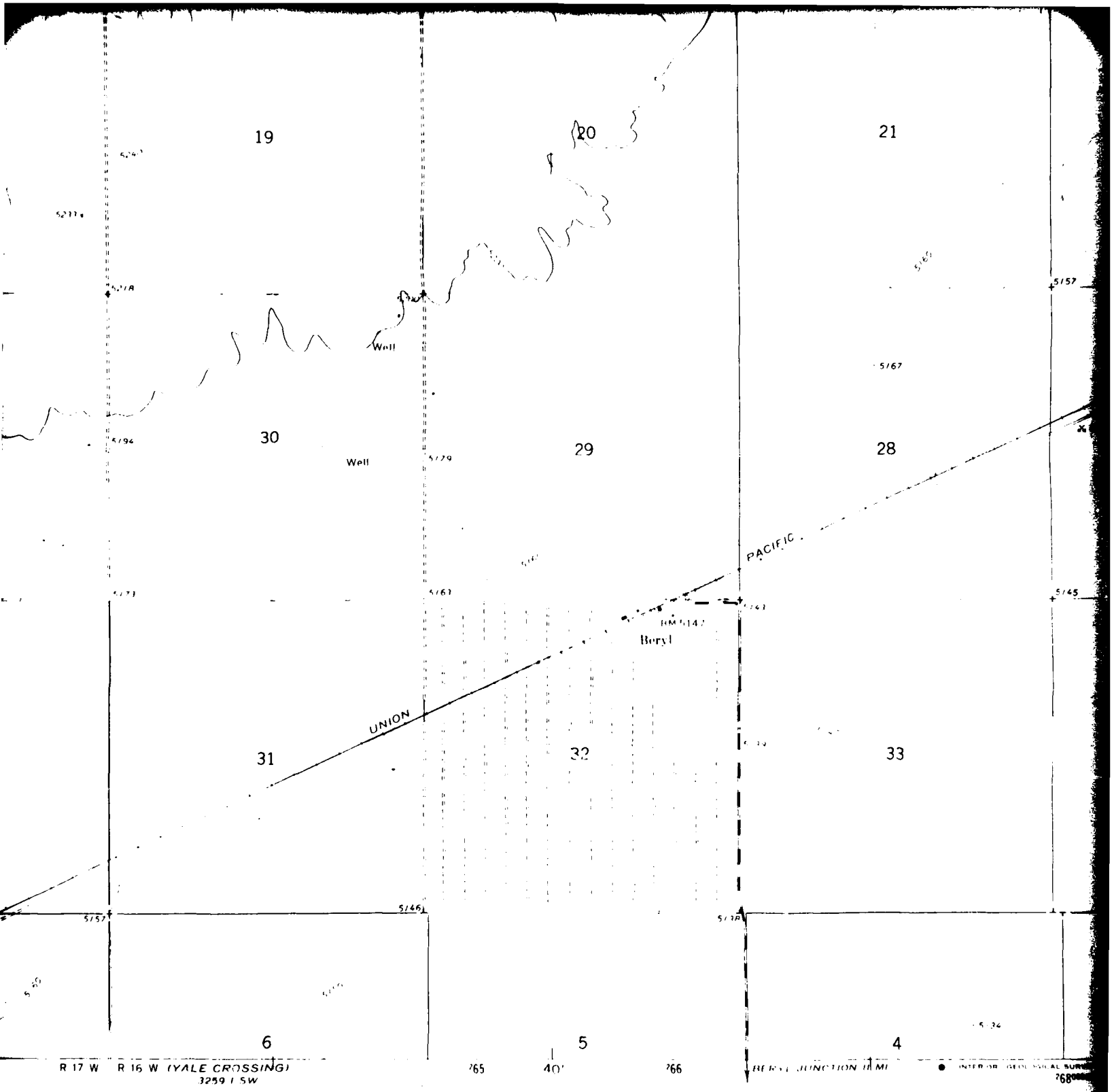
29 MILS 276 MILS

UTM GRID AND 1972 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1000

FOR SALE BY U.S.

A FOLDE



SCALE 1:24 000

0 1000 2000 3000 4000 5000 6000 7000 FEET

0 1 KILOMETRE

1 MILE

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 10 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSI

Primary highway, hard surface

Secondary highway, hard surface

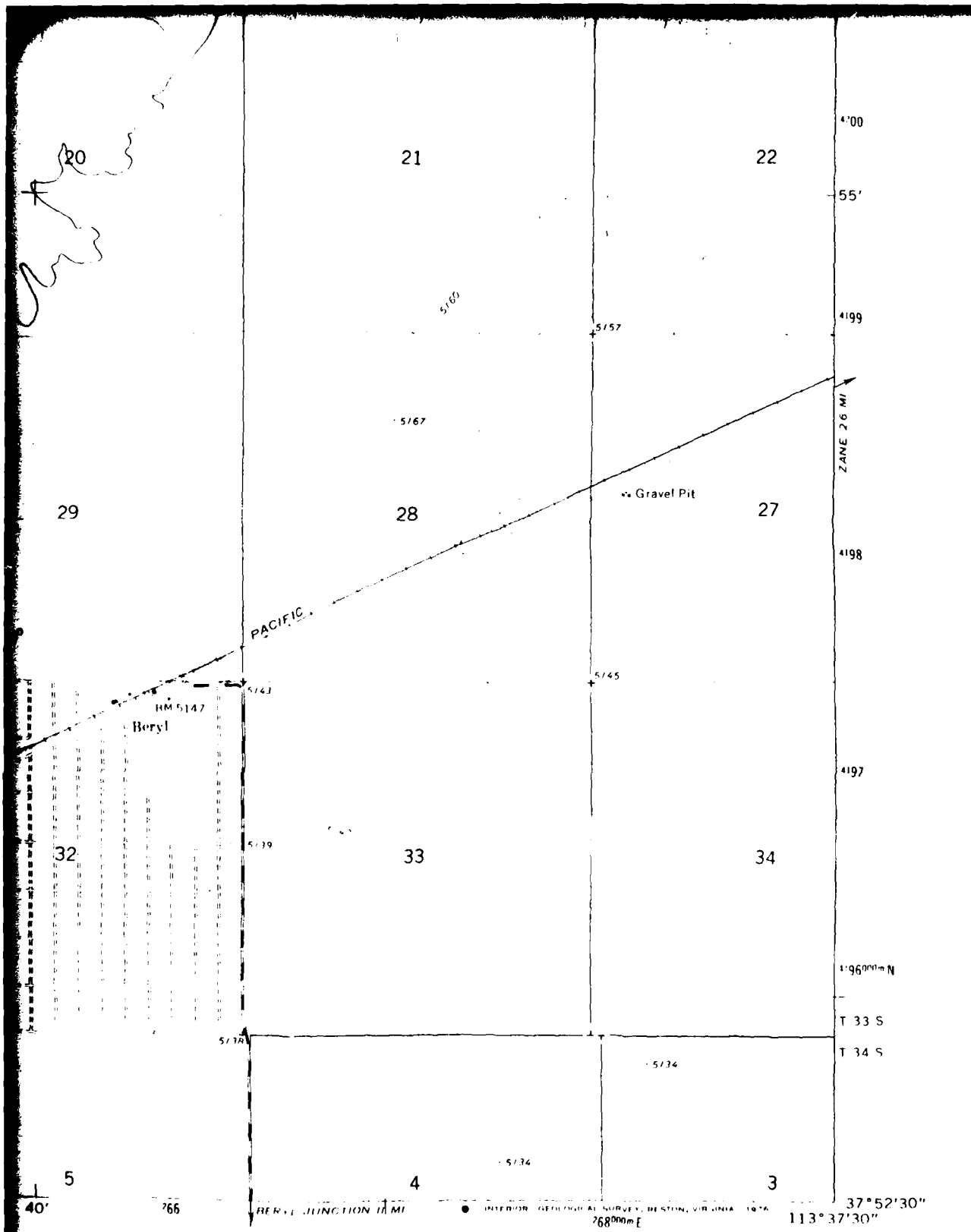
Interstate Route

UTAH

QUADRANGLE LOCATION

HIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
. GEOLOGICAL SURVEY, DENVER, COLORADO 80225 OR RESTON, VIRGINIA 22092
DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec
The Earth Technology Corporation



ROAD CLASSIFICATION

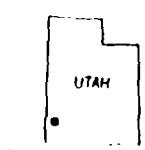
Primary highway, hard surface

Light duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route U. S. Route State Route



QUADRANGLE LOCATION

Ertec
The Earth Technology Corporation

BERYL, UTAH

N3752.5 W11337.5/7.5

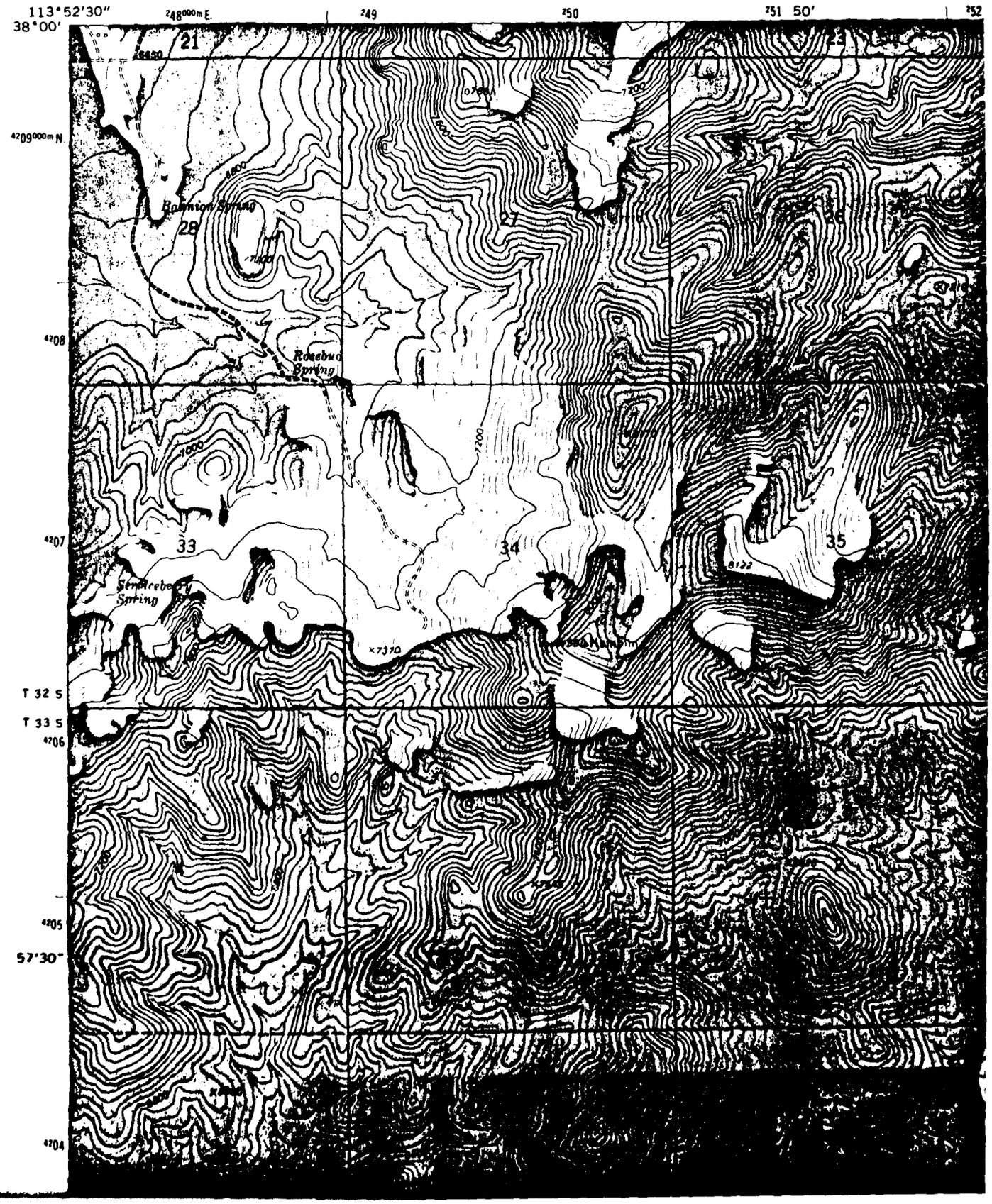
1972

AMS 3359 I NW—SERIES V897

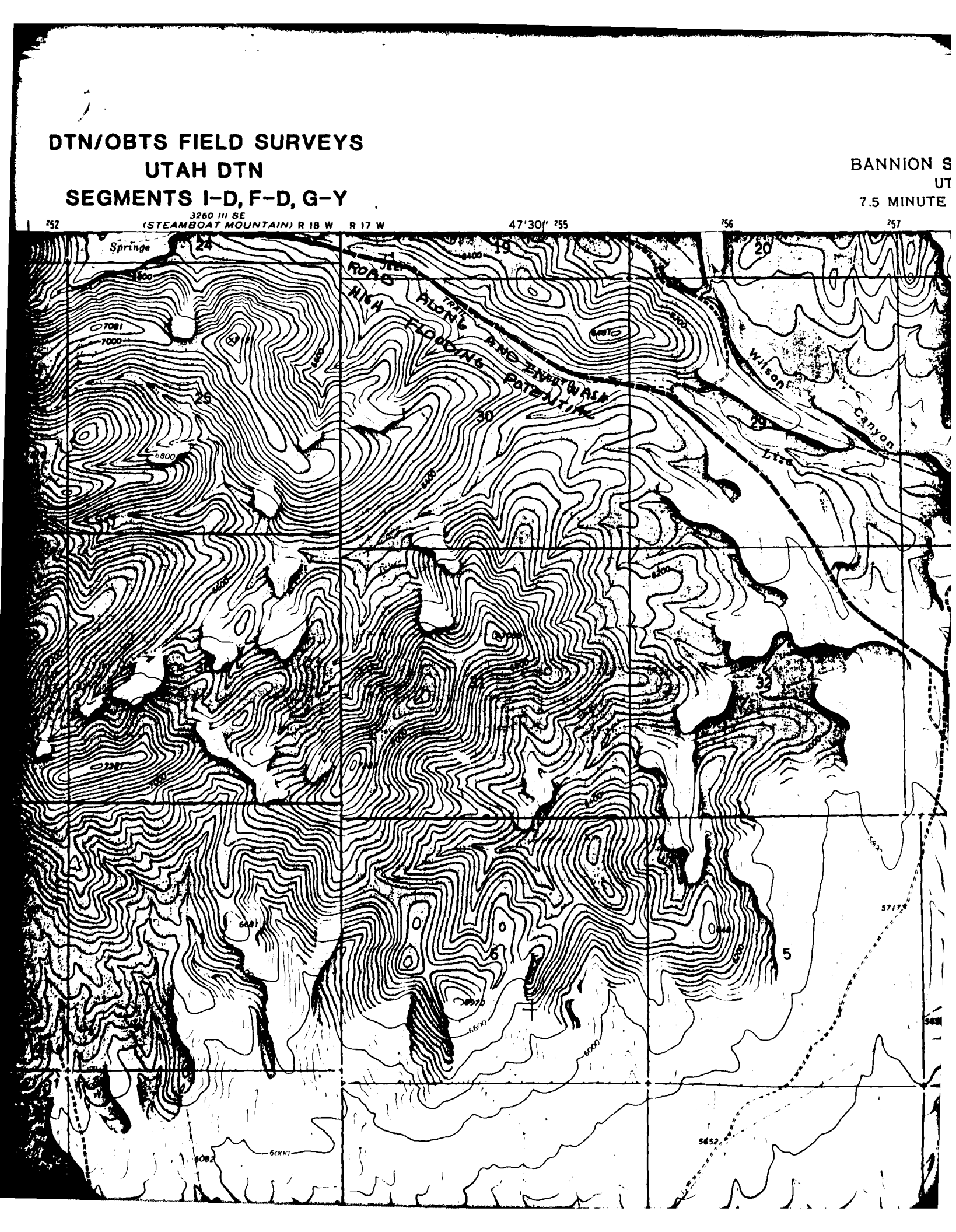
9

3260 III SW
(STEAMBOAT MOUNTAIN SW)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y



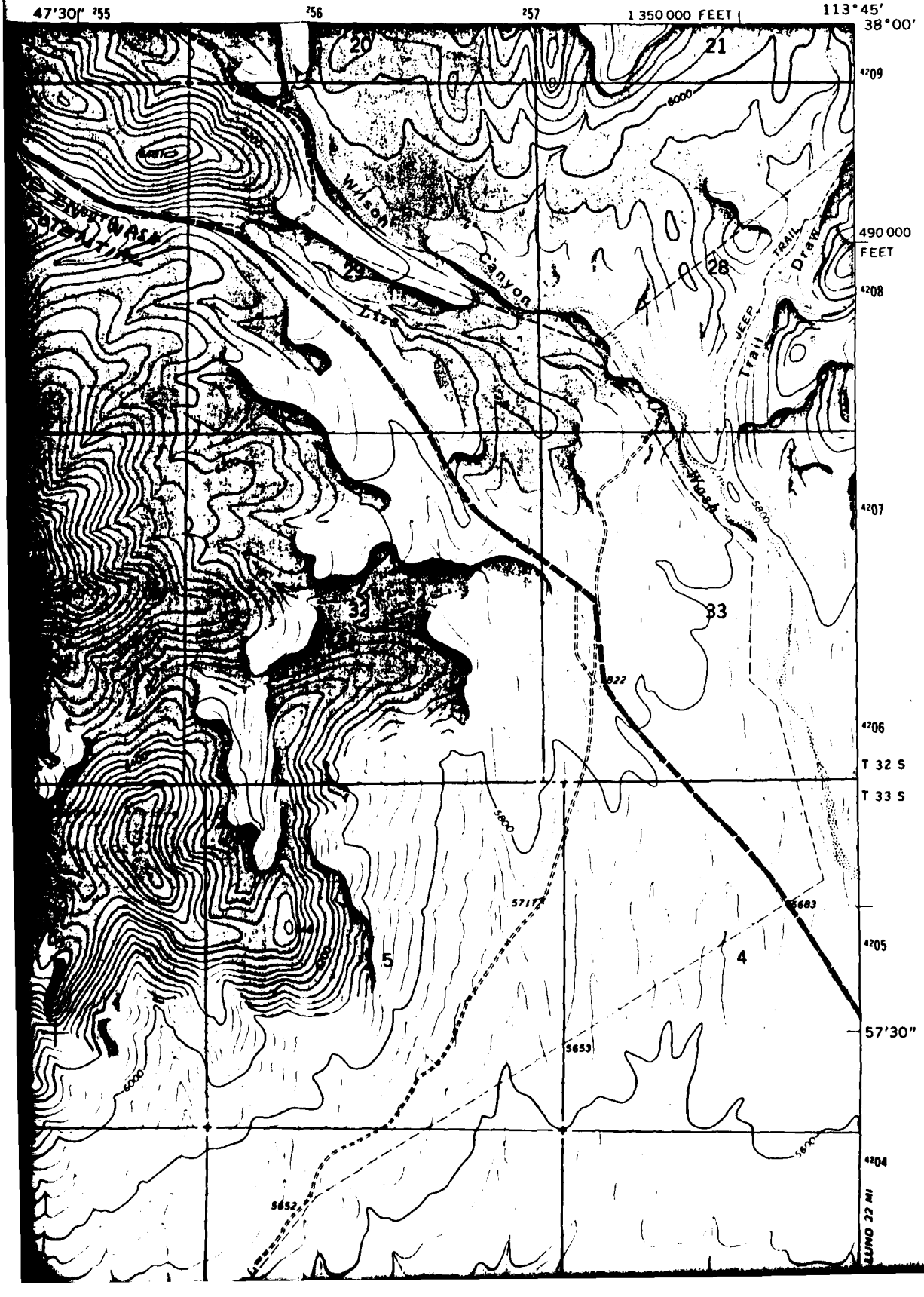
3

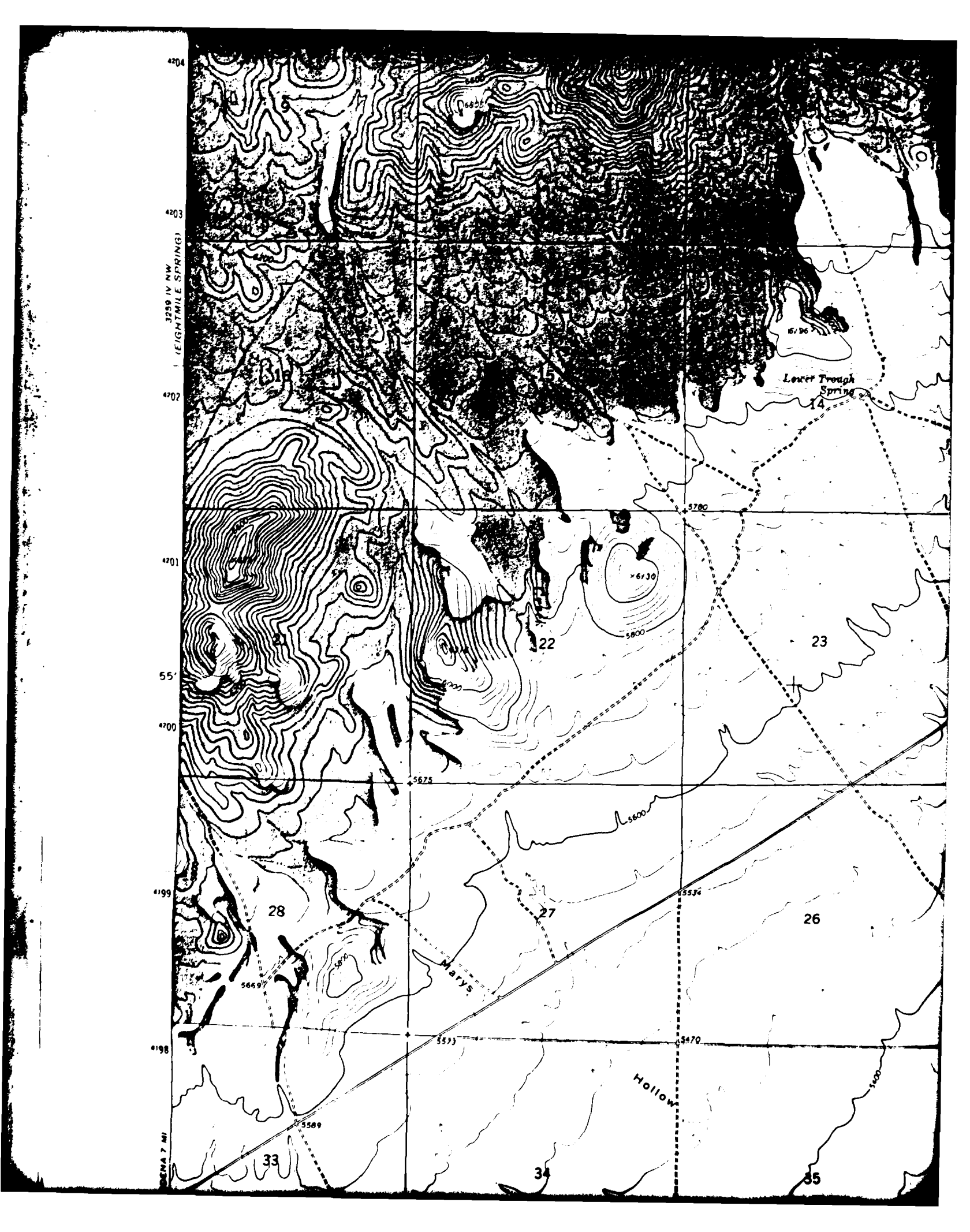
BANNION SPRING QUADRANGLE

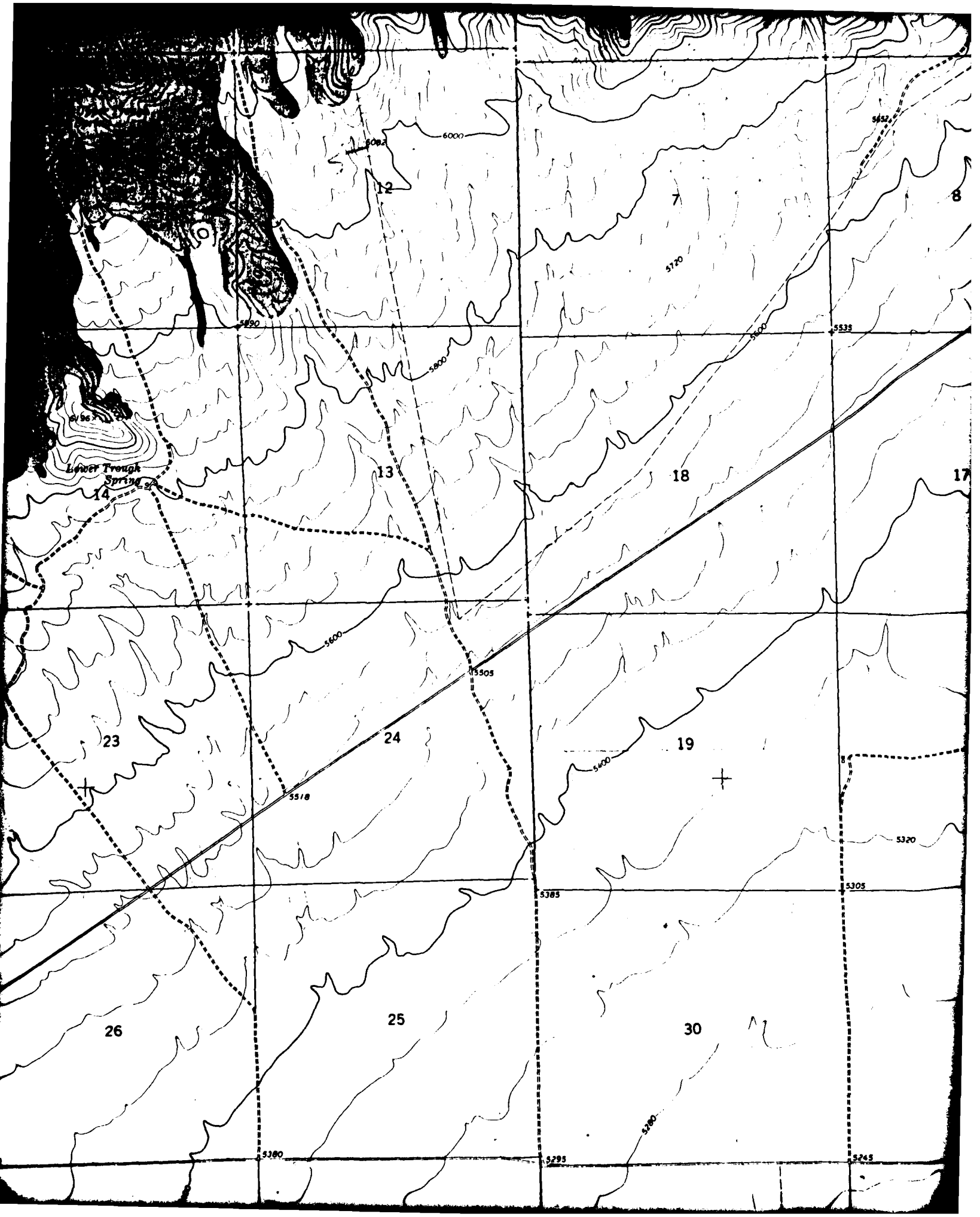
UTAH—IRON CO.

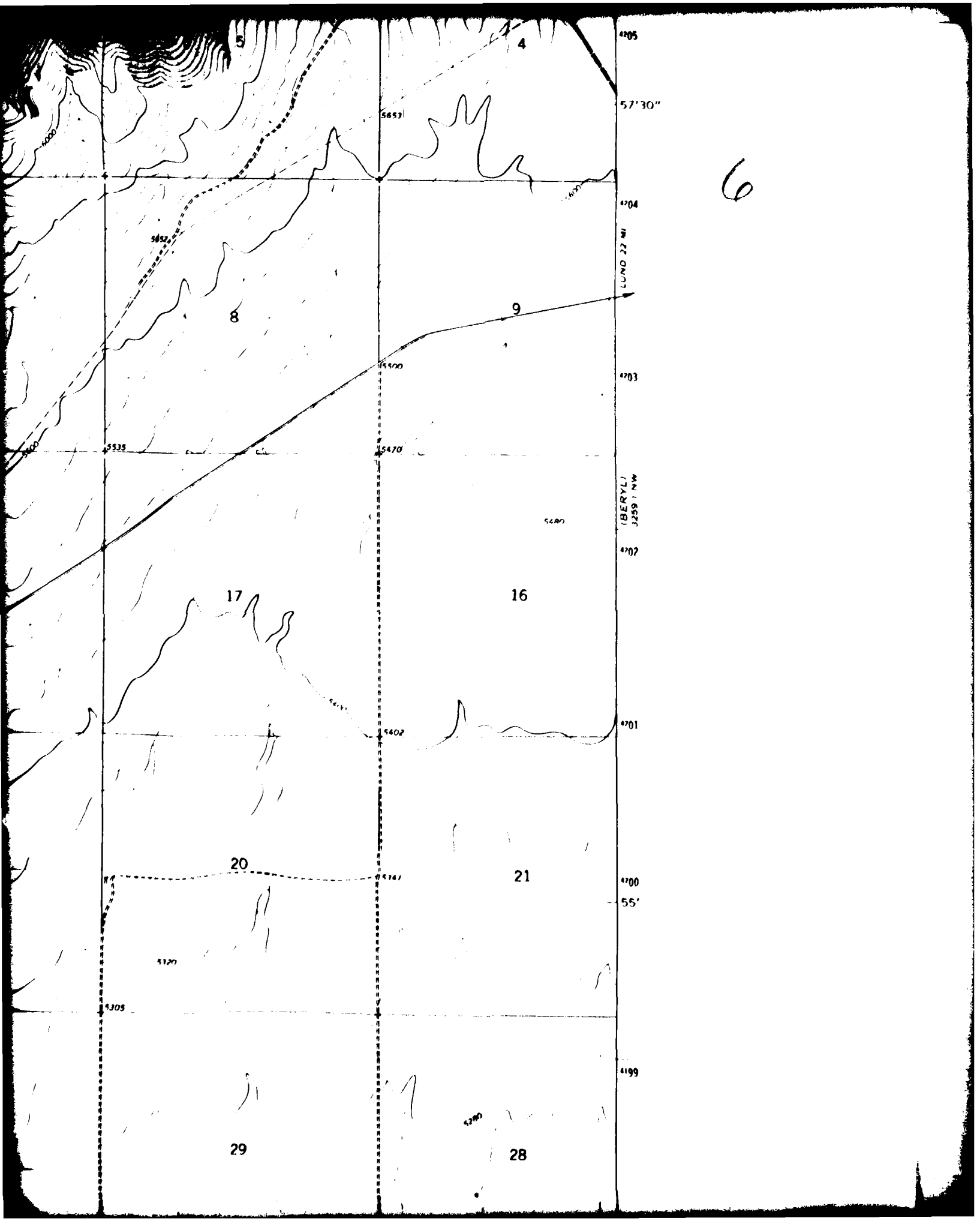
7.5 MINUTE SERIES (TOPOGRAPHIC)

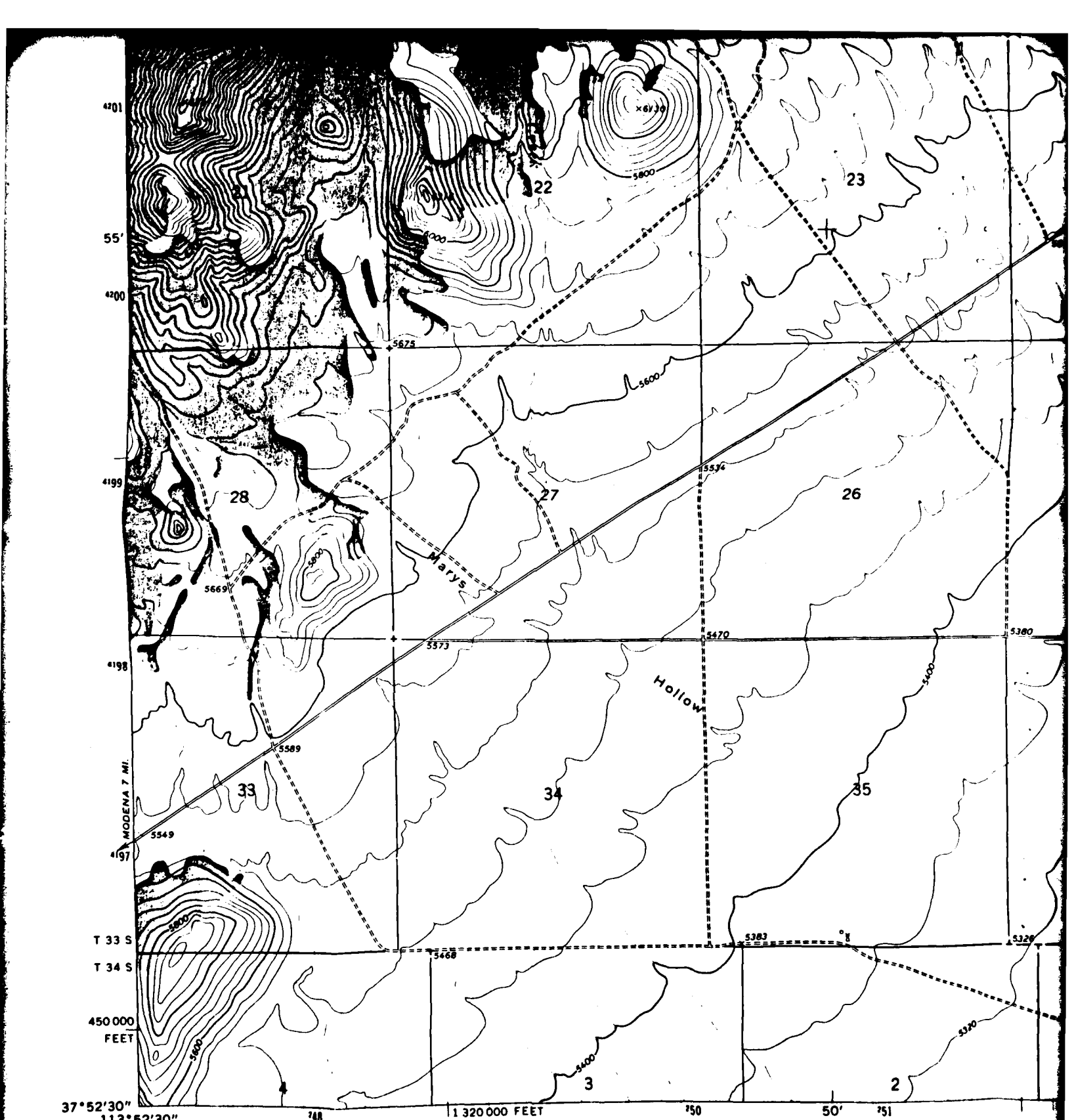
3260 II SW (BIBLE SPRING)




4204
4203
4202
4201
55'
4200
4199
4198
3259 IV NW
(EIGHTMILE SPRING)
Lower Trough Spring
5780
5800
5675
5600
5554
5573
5470
5589
Marys
Hollow
15
14
22
23
21
28
27
26
33
34
35


6000
6092
12
7
8
5720
5890
5535
5800
5600
6196
Lower Trough Spring
13
18
17
14
5600
5505
23
24
19
5400
5518
5320
5385
5305
26
25
30
5380
5295
5245


5
4
5653
4705
57'30"
6
4704
5652
LUND 22 MI
8
9
4703
5500
5535
5470
(BERYL)
3259 I NW
5480
4702
17
16
4701
5402
20
5161
21
4700
55'
4120
5305
4199
29
28



(MODENA) 3259 IV SW

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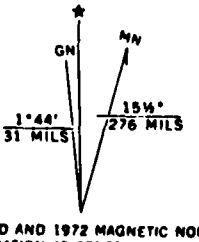
Control by USGS and NOS/NOAA

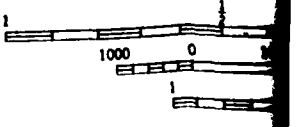
Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1972

Projection and 10,000-foot grid ticks: Utah coordinate system, south zone (Lambert conformal ic) 1000-metre Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

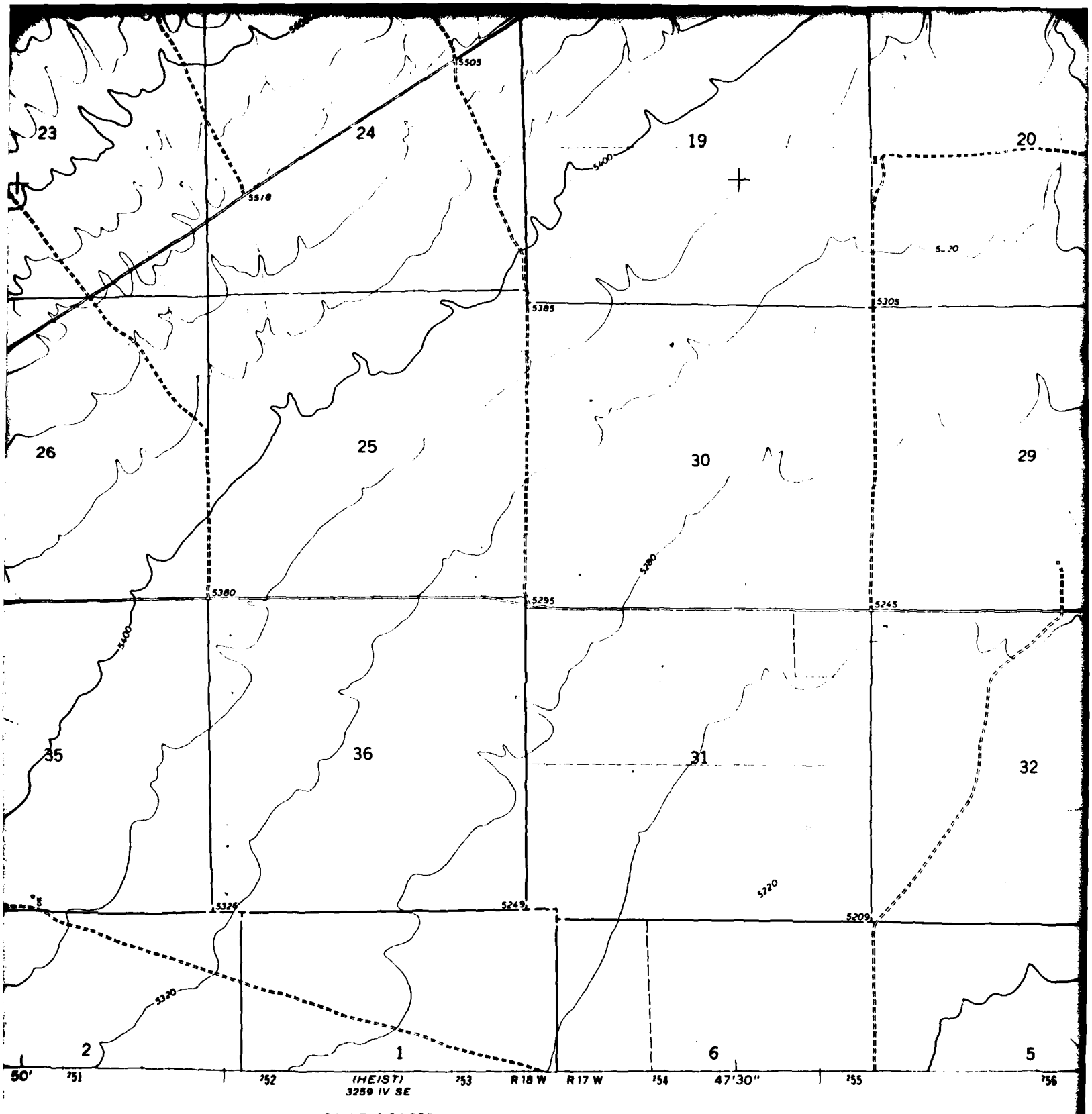


UTM GRID AND 1972 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET



DOT
NAT

THIS MA



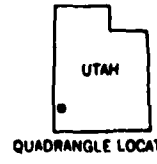
SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

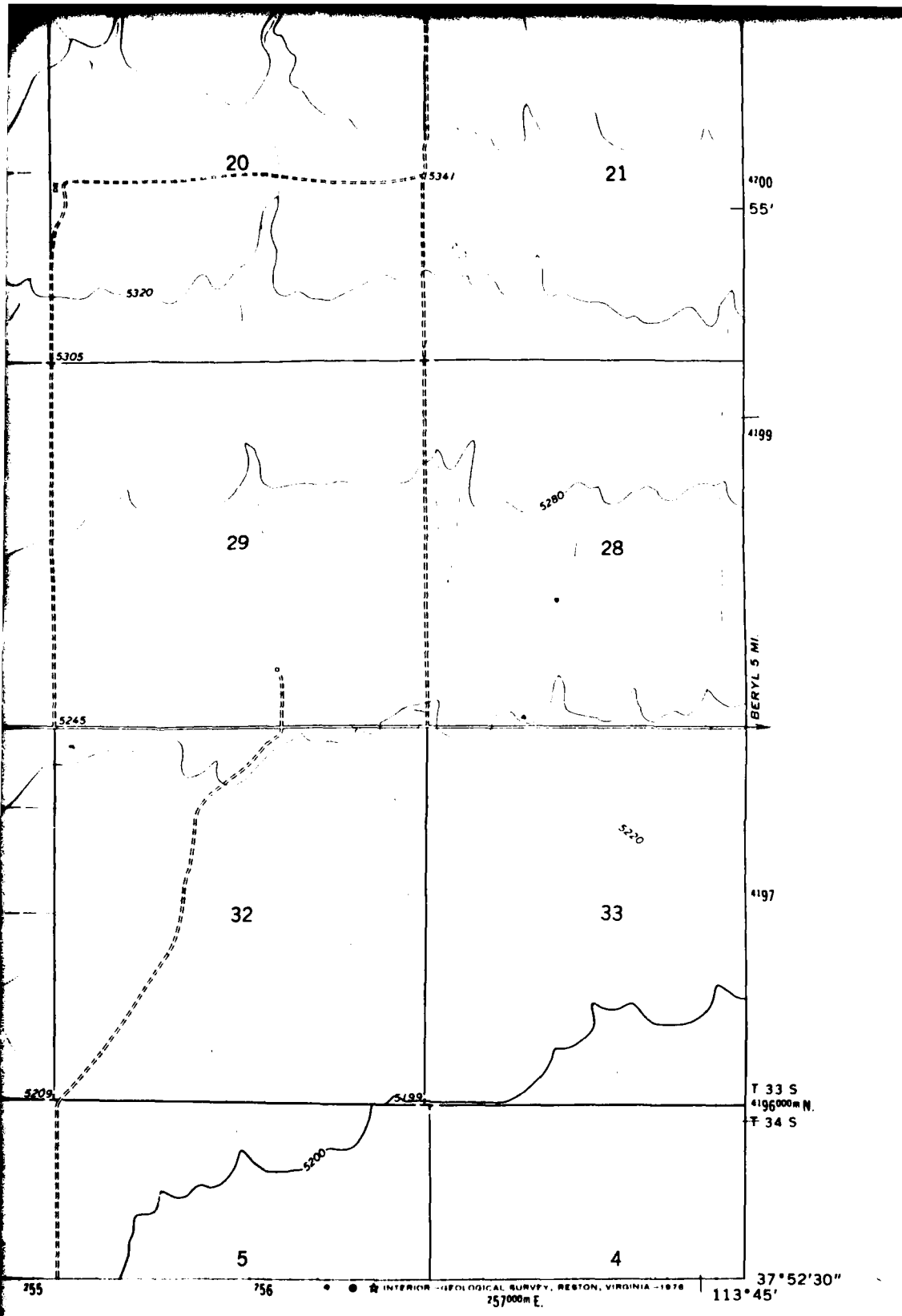
1 .5 0 1 KILOMETRE

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION

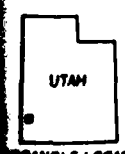
Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

( ) Interstate Route { } U. S. Route ( ) State Route



RANGLE LOCATION

Ertec

Tr e Earth Technology Corporation

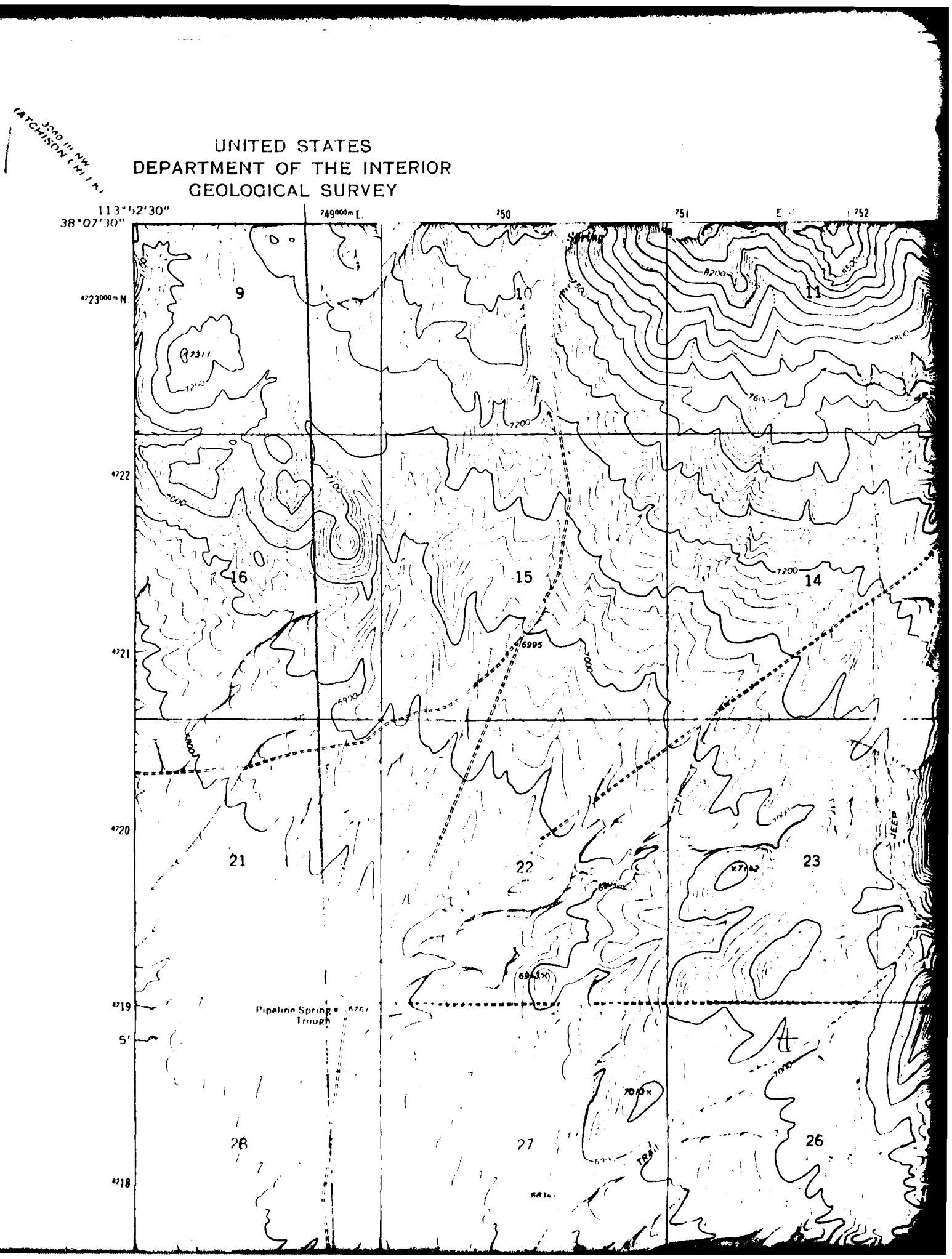
Property of U.S. Air Force

BANNION SPRING, UTAH

N3752.5—W11345/7.5

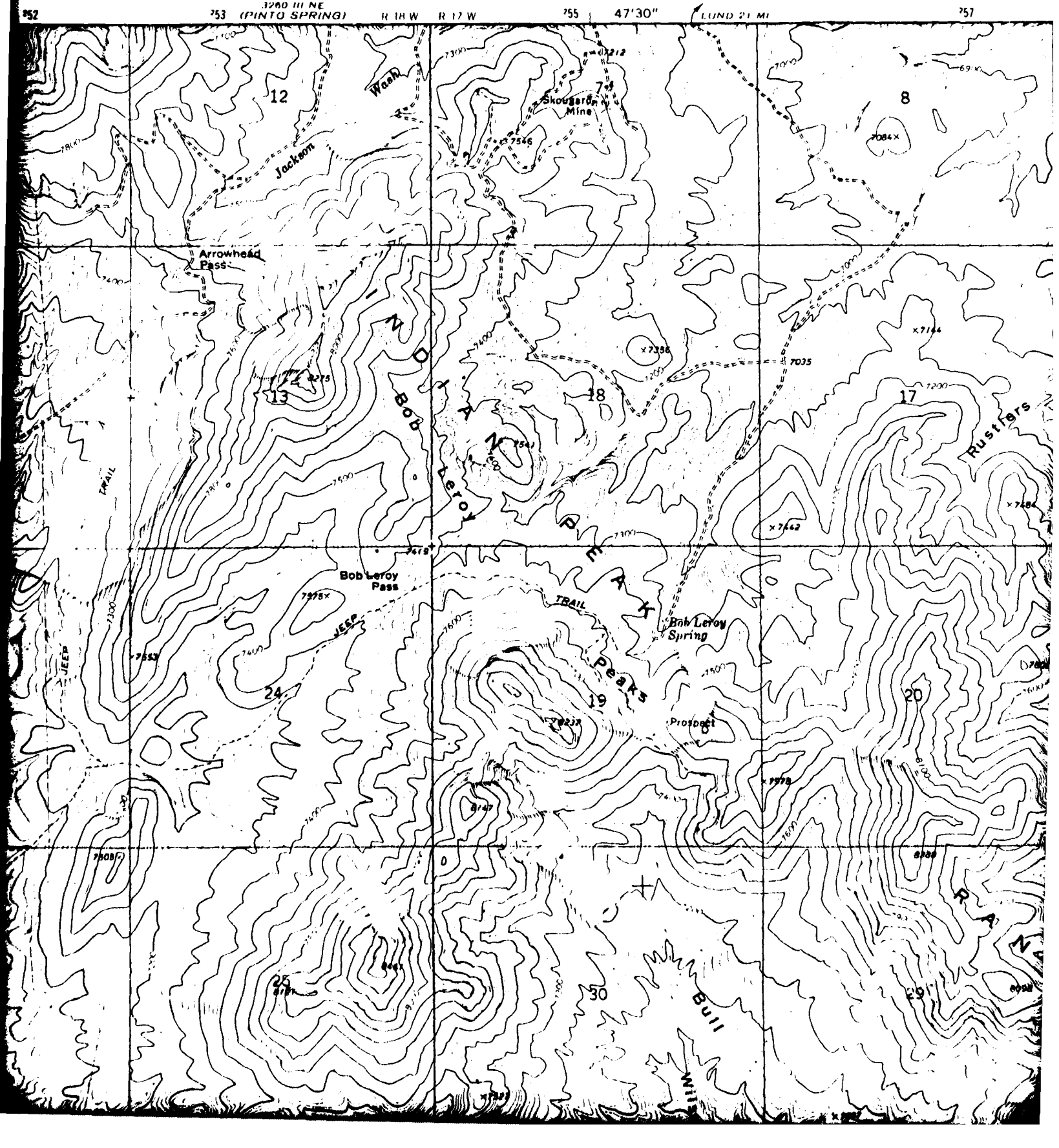
1972

9


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
113°12'30"
38°07'30"
749000m E
750
751
752
4723000m N
4722
4721
4720
4719
5'
4718
9
10
11
16
15
14
21
22
23
28
27
26
Pipeline Spring
Trough
Spring
JEEP
TRAIL
7200
7000
6900
6995

2

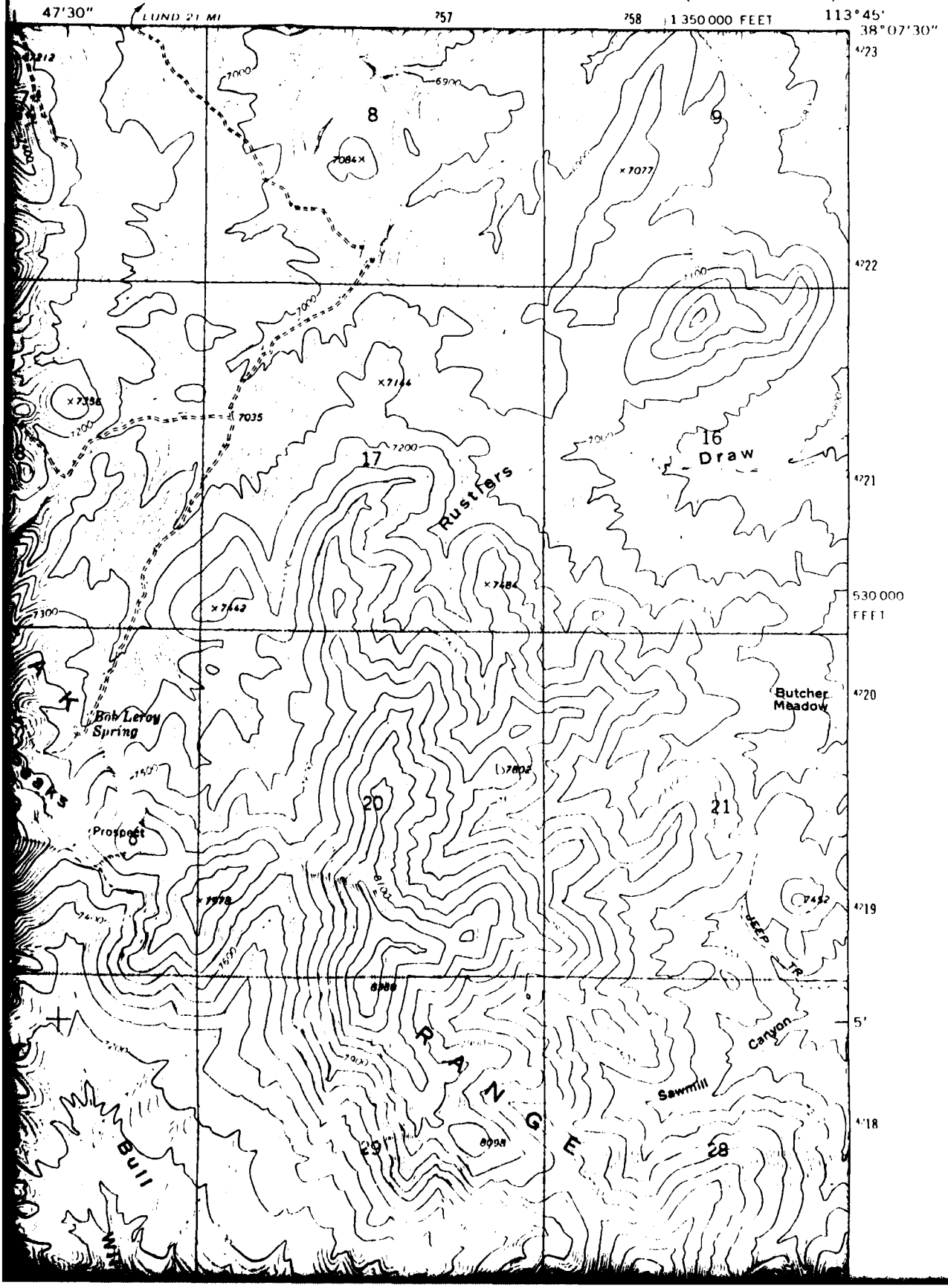
DTN/OBTS FIELD SURVEYS
UTAH DTN
SEGMENTS I-D, F-D, G-Y

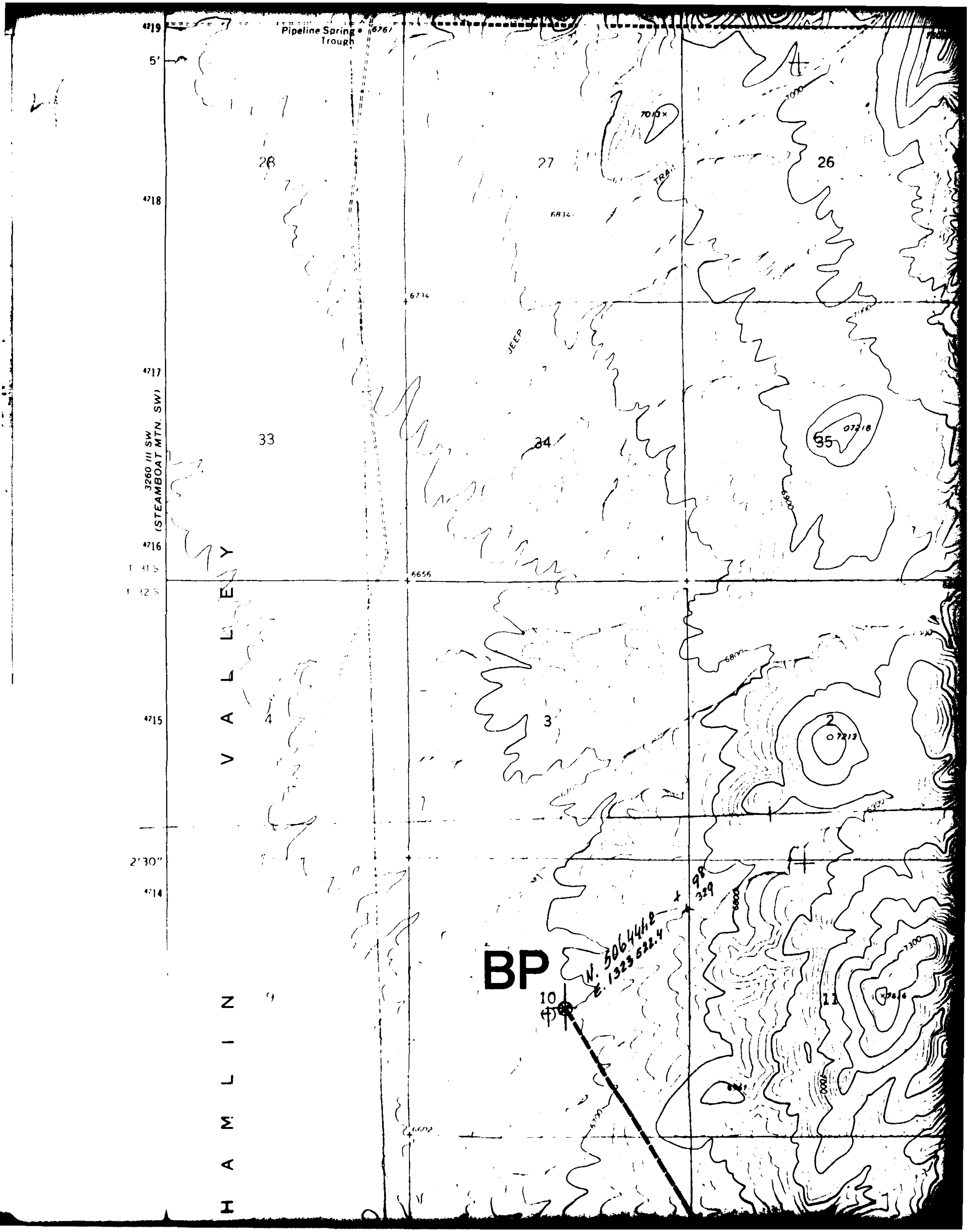


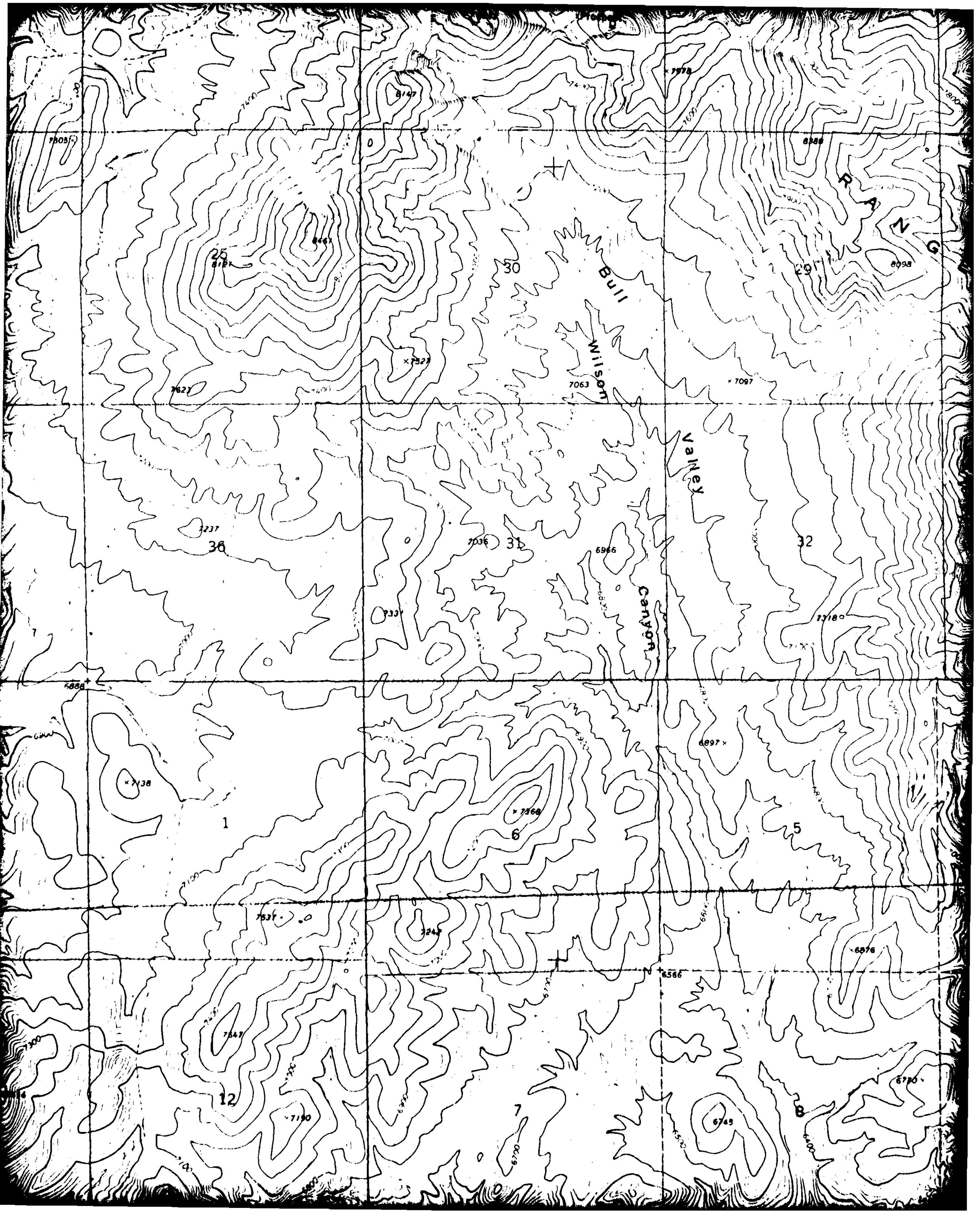
STEAMBOAT MTN. QUADRANGLE

UTAH—IRON CO.

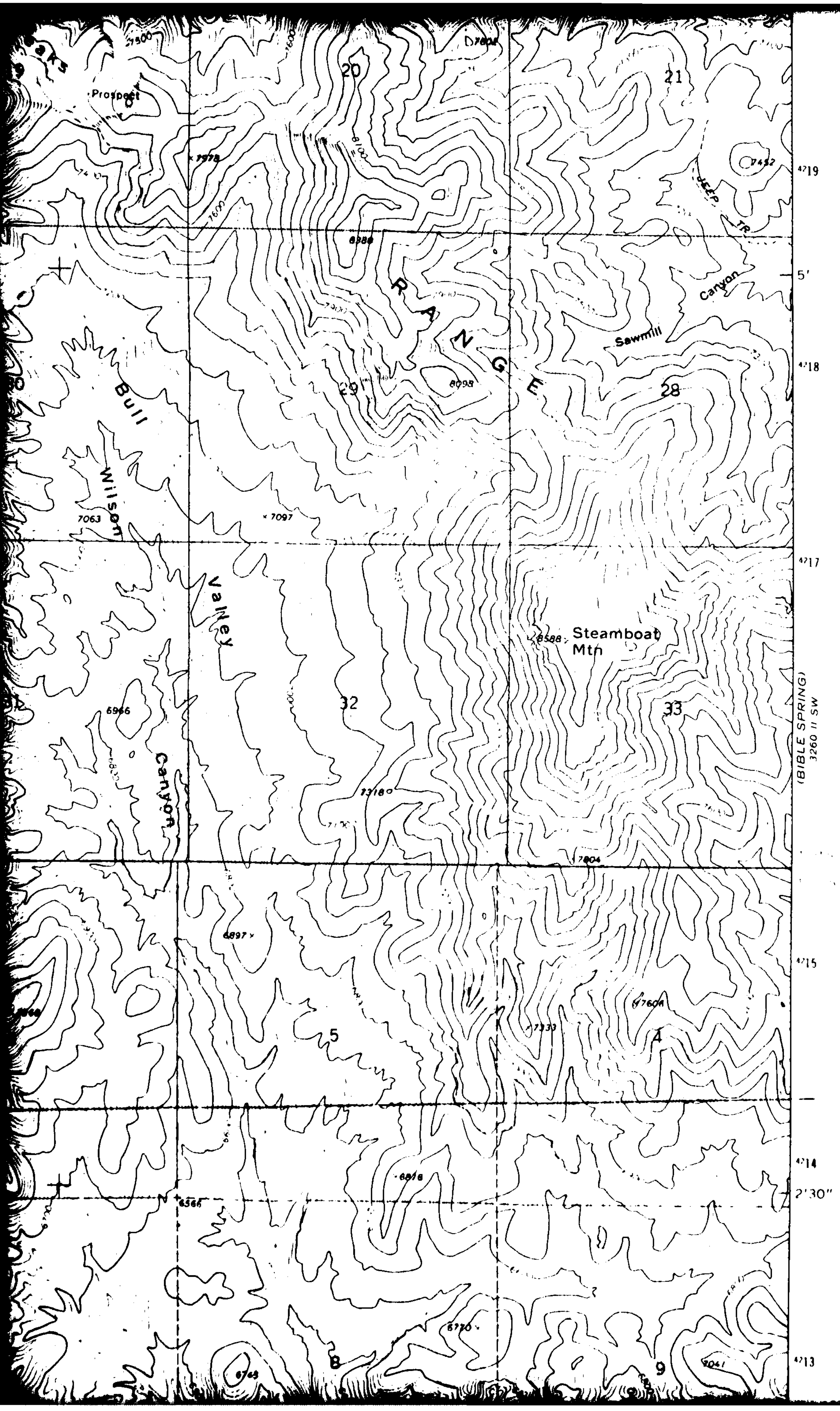
7.5 MINUTE SERIES (TOPOGRAPHIC)



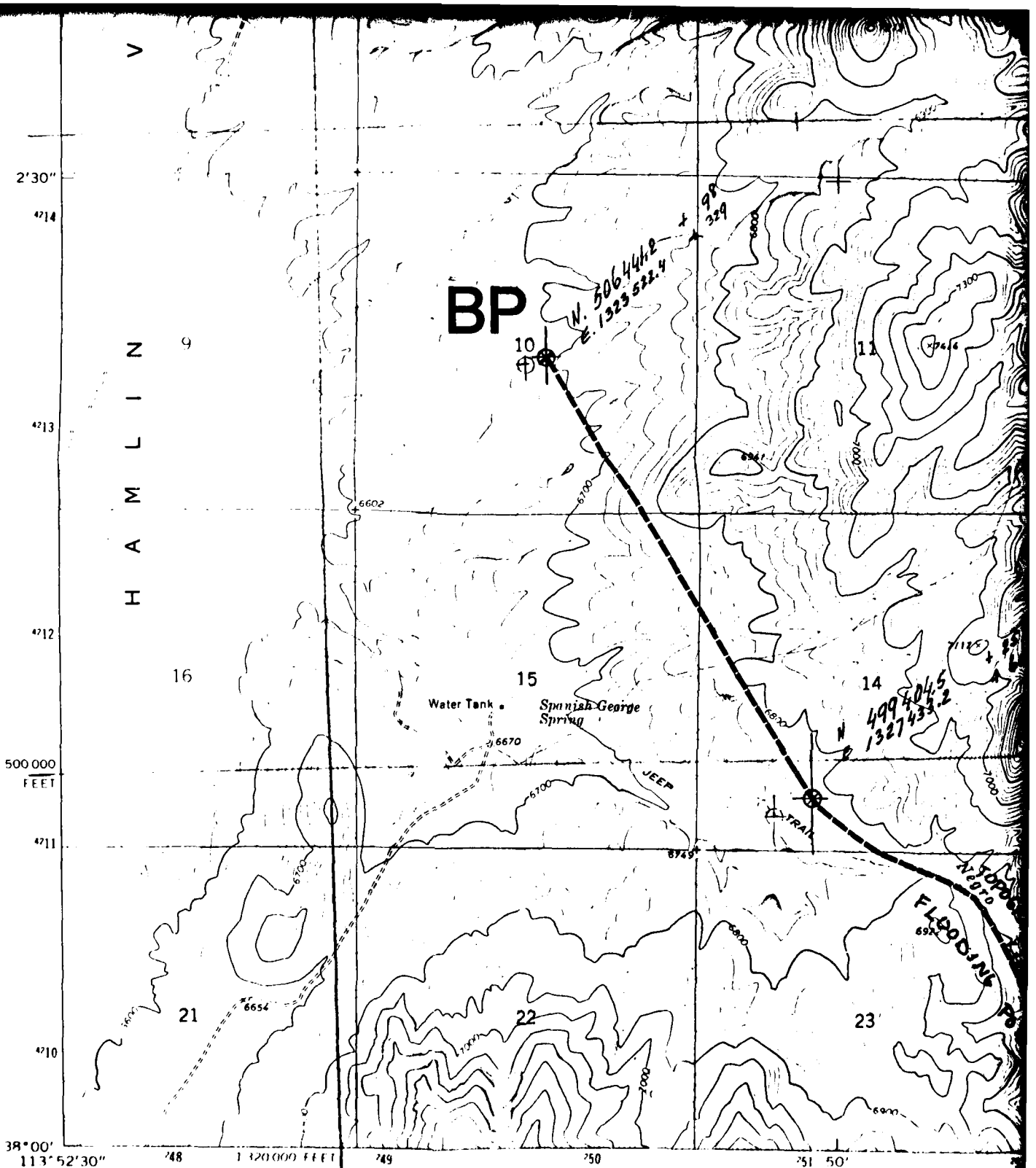

Pipeline Spring
Trough
6761
4219
5'
4218
4217
4216
4215
2'30"
4214
3260 III SW
(STEAMBOAT MTN. SW)
28
27
26
33
34
35
4
3
2
9
10
11
JEEP
6834
6734
6656
6602
7218
7213
6900
6800
7300
H A M L I N
V A L L E Y
BP
N. 506441.2
E. 1323522.4



R A N G
Bull
Wilson
Valley
Canyon
25
30
29
36
31
32
1
6
5
12
7
8
7978
8147
8380
8461
8137
8098
7527
7627
7063
7097
7505
7237
7036
6966
7337
7318
6888
6897
7138
7366
7537
7242
6876
6566
7547
7190
6745
6770


20
21
Prospect
7978
8100
7600
8380
RANGE
JEEP TR
7452
Sawmill
Canyon
29
8098
28
Bull
Wilson
7063
7097
Valley
Steamboat Mtn
8588
32
33
6966
Canyon
7318
7804
6897
7606
7333
5
4
6818
6566
6720
6745
8
9
7061
(BIBLE SPRING)
3260 II SW
4719
5′
4718
4717
4715
4714
2′30″
4713

6



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1970. Field checked 1971

Projection and 10,000 foot grid ticks: Utah coordinate system, south zone (Lambert conformal conic)
1000 meter Universal Transverse Mercator grid ticks, zone 12, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

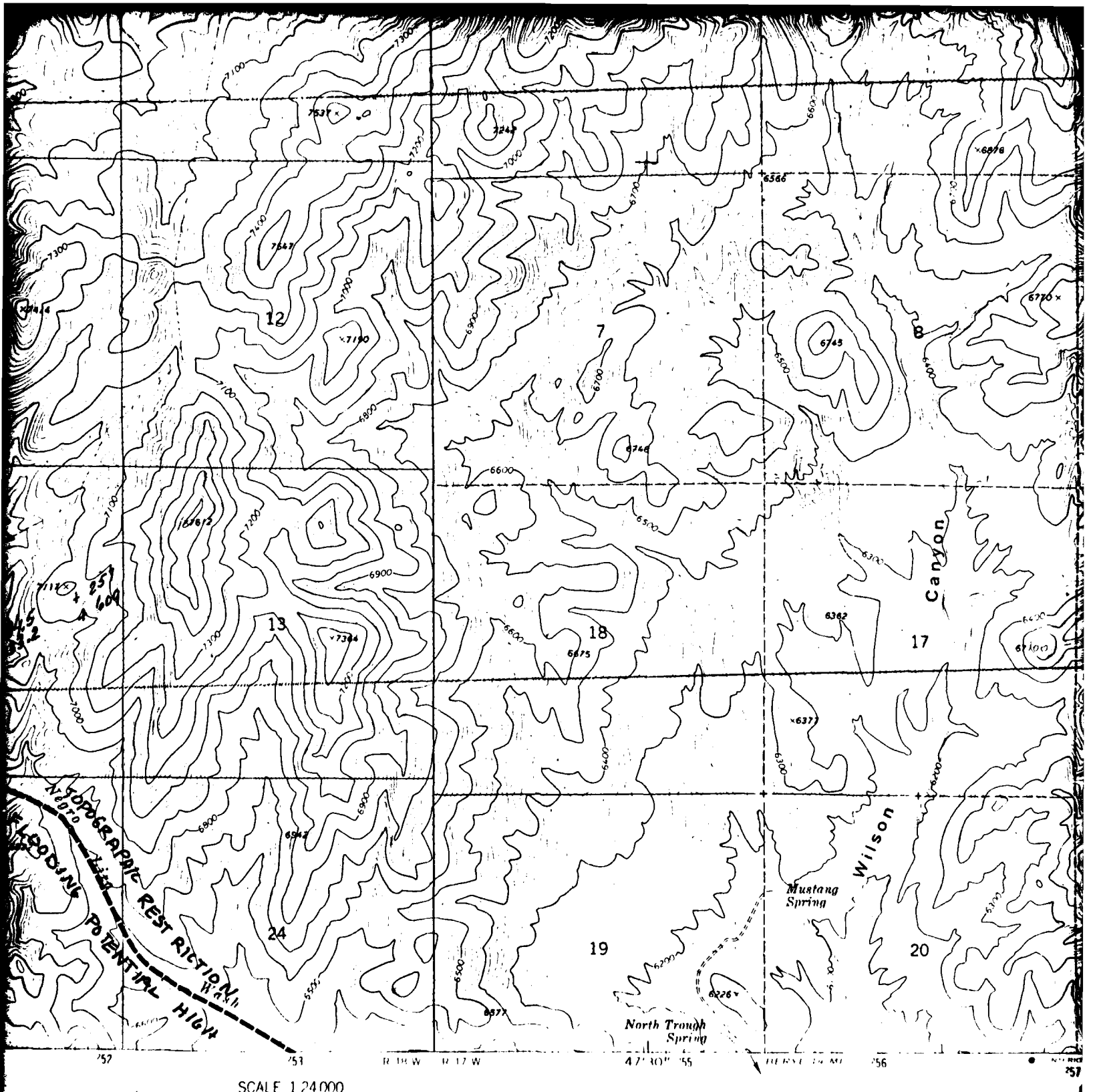
GN MN

1°44' 15½°
31 MILS 276 MILS

1000 FEET

FOR SALE BY U.S.
A FOLDER

7



SCALE 1:24000

CONTOUR INTERVAL 20 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

Primary highway, hard surface

Secondary highway, hard surface

Interstate Ro

UTAH

QUADRANGLE LOCATION

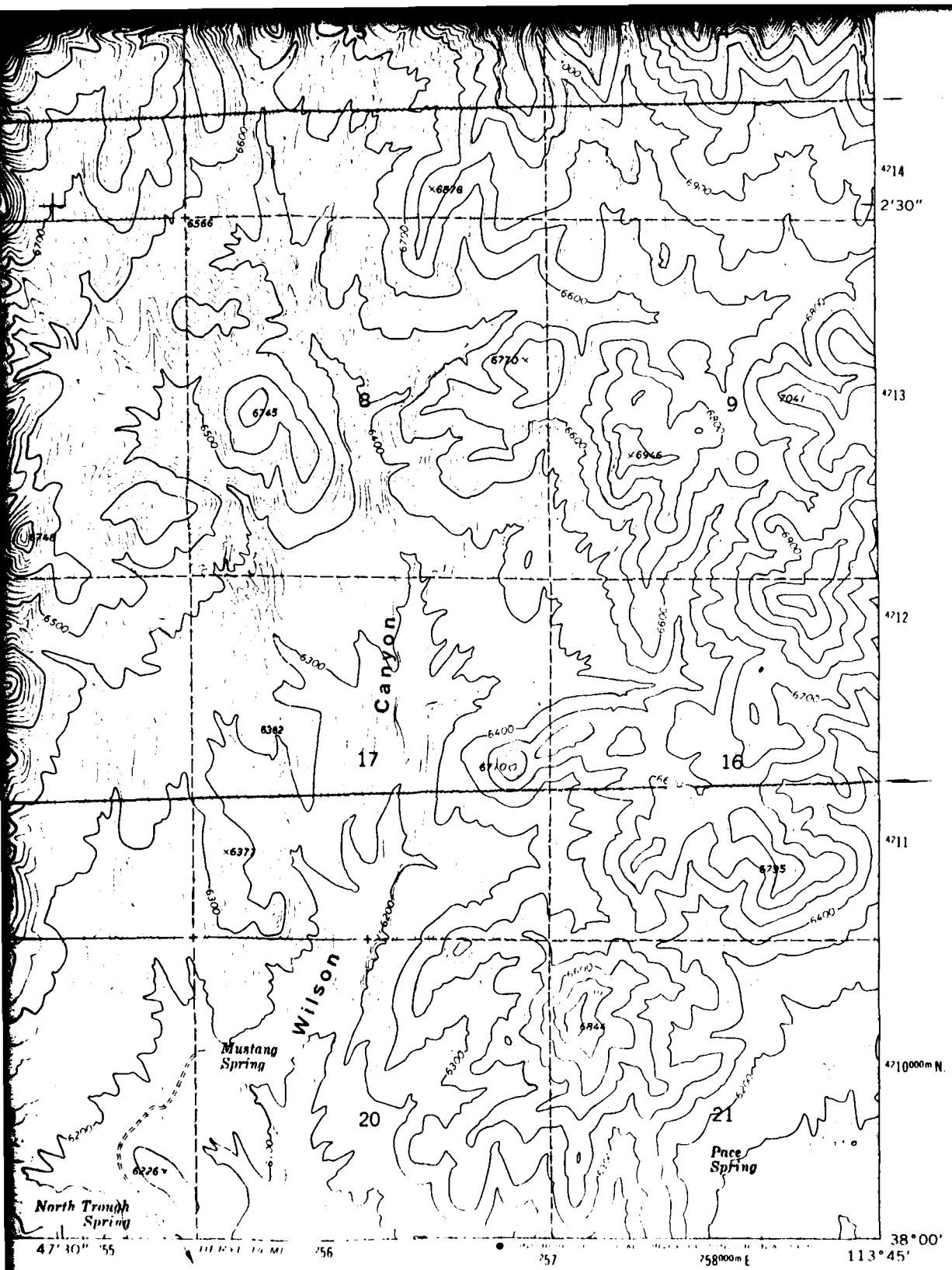
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

SALE BY U S GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Ertec

The Earth echnology Corporation



ROAD CLASSIFICATION

Primary highway, hard surface

Light duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route U. S. Route State Route

QUADRANGLE LOCATION

Ertec
The Earth echnology Corporation

STEAMBOAT MTN., UTAH

N 3800 W11 345 / 7 5

1971

9